



WATER SERVICE PROVIDERS DATA BOOK, 2070 – 2071 (2013 - 2014)



**Sector Efficiency Improvement Unit (SEIU)
Ministry of Urban Development
April 2015**

The photographs on the cover page record visits of SEIU staff to Lekhnath, Itahari and Salakpur as part of the capacity building for Bench Marking and Performance Improvement.

The photographs were made by Han Heijnen and Deepak K.C.

This publication was printed by



Gajunepa Pvt.Ltd
Tahachal, Kathmandu, Nepal

Email: gajunepa@gmail.com
Phone: 01 4270090

WATER SERVICE PROVIDERS DATA BOOK, 2070 – 2071 (2013 – 2014)

A partnership between

The Sector Efficiency Improvement Unit (SEIU)
Ministry of Urban Development

Second Small Towns Water Supply and Sanitation Sector Project
Implemented by the
Department for Water Supply and Sewerage (DWSS)
(ADB PROJECT No. 41022 / SEIUG3 - NEP)

and

Asian Development Bank
ADB Nepal Office

April 2015



FOREWORD

The Ministry of Urban Development (MoUD), as the lead WASH sector agency, established the Sector Efficiency Improvement Unit (SEIU) under the Water and Environment Division of the MoUD in 2009 and institutionalized it as a permanent unit in June 2012. SEIU aims to contribute to the Nepal WASH sector objective formulated by the Government of Nepal (NPC 2010) as “to improve public health and increase living standard of the people by providing safe, reliable and sustainable drinking water and sanitation services”.

During the last five years, SEIU has worked on

- Drafting a comprehensive WASH Act, refining policies in water supply and sanitation sector and facilitating implementation and compliance. In collaboration with Sector Agencies, SEIU has facilitated consultation and helped produce guidelines for water safety plans, on water use management plan, development and testing of guidelines on output-based aid, and standards and policies for wastewater management;
- Efficiency improvement of water supply and sanitation service providers (mostly in small towns) through (capacity development) for benchmarking, performance improvement planning and developing business plans. The key performance indicators focus on non-revenue water, consumer satisfaction, water resources, tariff fixation, revenue collection and human resources.
- Sector coordination and harmonization through various mechanisms, such as Joint Sector Reviews aimed at assessing sector performance and since 2014 on the drafting of a Sector Development Plan that would provide guidance up to 2030.

The present publication ‘**Water Service Provider Data Book, 2070-2071 (2013-2014)**’ captures the critical performance indicators of 63 piped water supply providers, with service areas ranging from 500 connections to well over 10,000.

The Benchmarking and Performance Assessment (BM/PA) of Service Providers Program was initiated in early 2013. The program aims to develop capacity for monitoring functionality and performance of Nepal’s water supply service providers as an instrument for improving the service delivery and performance of the urban water supply sector. The 2069-2070 data book featured 32 WSPs.

Since then, SEIU has connected with water service providers from all over the country: schemes constructed by DWSS and strengthened through WASMIP/JICA (2009-2013), those constructed under the Small Town Water Supply and Sanitation Project/ADB (2005-2015, and on-going), and schemes managed by the Nepal Water Supply Corporation. A few independent schemes are also part of the BM/PA family.

The publication of the first data book in 2014 has been followed by several consultations to compare the performance results of various schemes. SEIU has also visited several schemes to provide on-site advice.

I am pleased to note that staff and officials have become good colleagues and friends and are now visiting successful schemes to learn from the management. The membership of the Lekhnath WSS Scheme of the Water Operator Partnership in which it is linked with the Maynilad Water Supply Provider of Manila, Philippines, will ensure linkage to international expertise that will become available to the Nepal Water Supply Sector.

During 2015 we hope to further create capacity with our Sector partners and in the context of the Third Small Town Water Supply Project for performance improvement aimed at raised functionality and service delivery. SEIU is connected with 105 water supply providers, of which 63 have been included in the current data book. As the government has a policy to substantially increase the number of towns and larger settlements with centralized water supply, there will be plenty of work ahead.

MoUD would like to acknowledge the work done by the water service providers that readily provided the information, and by the SEIU team and its consultants in producing and validating the data needed to prepare this data book. The support of the ADB in financing the effort and facilitating printing of this document is equally acknowledged.

Lastly, MoUD welcomes other water service providers to come forward and provide their data for inclusion in the next issues of the Nepal Water Service Providers Data Book.



Ram Chandra Devkota

Joint Secretary (Water Supply and Environment Division) and
Coordinator SEIU
Ministry of Urban Development



FOREWORD

Since 2001, the Department of Water Supply and Sewerage has implemented the Small Town Water Supply and Sanitation Project. The first project was concluded in 2009 with 29 town water supply systems constructed. The second phase of the project focused on the need to ensure long-term functionality of these schemes. Thus the design of the Second Small Town Water Supply and Sanitation Project aimed to include also sustainability aspects.

To that effect the Ministry of Urban Development (MoUD) requested financial assistance toward the cost of Sector Efficiency Improvement Unit or SEIU in the Ministry, under the Second Small Town Water Supply and Sanitation Sector Project. The objective of SEIU is to develop an efficient, effective and accountable water supply and sanitation sector instrument that re-emphasizes improving operating efficiency and quality of service particularly in emerging urban areas. Separately, capacity building support was received for 13 towns in Eastern Nepal as part of the WASMIP/JICA project.

Improving both the efficiency and effectiveness by which local government, water supply utilities, water users and sanitation committees (WUSCS) and other service providers operate in their coverage areas will depend on meticulous planning and coordination that would harmonize the different institutional initiatives and arrangements in the sector.

The Benchmarking and Performance Assessment (BM/PA) of Service Providers Program was initiated by SEIU in early 2013. The program develops capacity for monitoring functionality and performance of Nepal's water supply service providers as an instrument for improving the service delivery and performance of the urban water supply sector. Since then, SEIU has connected with water service providers from all over the country.

The publication of the first databook in 2014 has been followed by several consultations to compare the performance results of various schemes, thus supporting learning among the Water Supply Providers.

I welcome the publication of the '**Water Service Providers Data Book, 2070-2071 (2013-2014)**' and will help distribute the publication to all DWSS Regional and District offices, the Water Service Providers and other interested Sector Partners.

SEIU is connected with 105 water supply providers, of which 63 have been included in the current data book. DWSS hopes to integrate the BM/PA methodology into the context of the Third Small Town Water Supply Project and continue this excellent functionality enhancement approach in coming years.

Ram Deep Sah
Director General

Department for Water Supply and Sewerage



ACKNOWLEDGEMENTS

The Ministry of Urban Development (MoUD), Sector Efficiency Improvement Unit (SEIU) and the Asian Development Bank (ADB) wish to thank the following water service providers for their cooperation in providing the information that made the publication of this data book possible.

VDC/Town	Utility
Aanbukhaireni	Aanbukhaireni Water Supply Users and Sanitation Committee
Attariya	Attariya Drinking Water and Sanitation Users Association
Baglung	Baglung Water and Sanitation Users Association
Banepa	Nepal Water Supply Corporation, Banepa
Bardghat	Bardghat Water Supply and Sanitation Users Association
Belbari	Belbari Small Town Water and Sanitation Users Committee
Beljhundi	Beljhundi Water Supply and Sanitation Users Association
Beni	Beni Water Supply and Sanitation Users Association
Besishahar	Besishahar Water Supply and Sanitation Users Committee
Bhadrapur	Nepal Water Supply Corporation, Bhadrapur
Bhairahawa	Nepal Water Supply Corporation, Bhairahawa
Bharatpur	Bharatpur Water Supply Management Board
Bhimad	Bhimad Water and Sanitation Users Committee
Bijuwar	Brihat Bijuwar Small Town Drinking Water Users and Sanitation Association
Budhabare	Budhabare Small Town Drinking Water and Sanitation Users Association
Chainpur	Chainpur Drinking Water and Sanitation Consumer Committee
Chandragadhi	Chandragadhi Water Users and Sanitation Committee
Damak	Damak Water and Sanitation Users Association
Damauli	Damauli Water Supply and Sanitation Users Association
Dhangadhi	Nepal Water Supply Corporation, Dhangadhi
Dhulabari	Dhulabari Water Users and Sanitation Committee
Dhulikhel	Dhulikhel Drinking Water and Sanitation Users Committee
Dolakha	Dolakha Bazar Water Users and Sanitation Committee
Duhabi	Duhabi Water Supply Project Main Users Committee
Fikkal	Fikkal Drinking Water and Sanitation Users Association
Gaindakot	Gaindakot Water Supply Users and Sanitation Organization
Gaur	Nepal Water Supply Corporation, Gaur
Gauradaha	Gauradaha Water and Sanitation Users Committee
Ghorahi	Ghorahi Drinking Water Users and Sanitation Association
Haraicha	Haraicha Water Supply and Sanitation Users Committee
Hetauda	Hetauda Water Supply Management Board
Itahari	Itahari Small Town Water Supply and Sanitation Users Association
Jaleswor	Nepal Water Supply Corporation, Jaleswor

VDC/Town	Utility
Kakarvitta	Kakarvitta Water Users and Sanitation Association
Karmaiya	Karmaiya Water and Sanitation Users Committee
Kawasoti	Kawasoti Water Supply and Sanitation Users Association
Khairenitar	Khairenitar Small Town Water Supply and Sanitation Users Association
Khajura	Khajura Drinking Water Consumer and Sanitation Committee
Krishnanagar	Nepal Water Supply Corporation, Krishnanagar
Lakhanpur	Lakhanpur Water Supply and Sanitation Users Committee
Lamahi	Lamahi Water Supply and Sanitation Users Committee
Lekhath	Lekhath Small Town Water Supply and Sanitation User Committee
Mahendranagar N	Nepal Water Supply Corporation, Mahendranagar
Mahendranagar W	Mahendranagar Water Users and Sanitation Committee
Mangadh	Birat/Mangadh Water Supply and Sanitation Users Committee
Nayagaun	Nayagaun Water Supply Users and Sanitation Association
Parsa	Parsa Small Town Water Supply and Sanitation Consumers' Association
Pathari	Pathari Water Users and Sanitation Committee
Pragatinagar	Pragatinagar Water Supply and Sanitation Users Committee
Prithvinarayan	Prithvinarayan Small Town Drinking Water & Sanitation Users' Committee
Ratnanagar	Ratnanagar Water Supply and Sanitation Users Association
Salakpur	Salakpur Water Supply and Sanitation Users Committee
Shanischare	Shanischare-Arjundhara Water Supply and Sanitation Users Committee
Shankarnagar	Shankarnagar Water Users and Sanitation Association
Shivalaya	Shivalaya Water Supply User and Sanitation Organization
Siddeshwor	Siddeshwor Water Supply Users and Sanitation Committee
Simara	Simara Water Users and Sanitation Committee
Sunwal	Sunwal Water Supply and Sanitation Committee
Surunga	Surunga Water Supply and Sanitation Users Association
Tankisinwari	Tankisinwari Water Supply Users and Sanitation Committee
Taulihawa	Nepal Water Supply Corporation, Taulihawa
Tulsipur	Tulsipur Water Supply and Sanitation Users Association
Urlabari	Urlabari Water Supply Users and Sanitation Association

Funding for the Benchmarking and Performance Assessment of Service Providers Program and for the preparation of the Data Book was provided by the Asian Development Bank. However, the views and analyses expressed here do not necessarily reflect those of the MoUD, SEIU and ADB. The Nepal Water Service Providers Data Book 2070 – 2071 (2013-2014)¹ was prepared by the SEIU team headed by Kabindra Bikram Karki (Senior Divisional Engineer), and supported by Prayash Ghimire (Engineer, SEIU), Cesar E. Yñiguez (Service Providers Benchmarking and Efficiency Improvement Expert, SEIUC), Krishna Rana (Senior Water Supply and Sewerage Engineer, SEIUC), Deepak KC (Project Officer, SEIUC) and Han Heijnen, SEIUC Team Leader and Senior Sector Policy Analyst. The support of Lahmeyer IDP, Inc. of Manila and of Total Management Services (TMS) Pvt. Ltd. in publishing the Data Book is gratefully acknowledged.

DISCLAIMER

The findings, interpretations, and conclusions expressed herein are entirely those of the authors and should not be attributed to the ADB. The ADB does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of the ADB concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

Measurement Units and Symbols

km	kilometer
km ²	square kilometer
lpcd or l/c/d	liter per capita per day
m	meter
m ³	cubic meter
m ³ /d	cubic meter per day
m ³ /d/c	cubic meter per day per capita
%	percent

¹ Sector Efficiency Improvement Unit (SEIU), 2015, *Nepal Water Service Providers Data Book 2070 – 2071 (2013-2014)*, Kathmandu, Ministry of Urban Development

Abbreviations and Acronyms

ADB	Asian Development Bank
ADWSUA	Attariya Drinking Water and Sanitation Users Association
AWSUSC	Aanbukhaireni Water Supply Users and Sanitation Committee
B/MWSSUC	Birat/Mangadh Water Supply and Sanitation Users Committee
BBSTDWUSA	Brihat Bijuwar Small Town Drinking Water Users and Sanitation Association
BSTDWSUA	Budhabare Small Town Drinking Water and Sanitation Users Association
BSTWSUC	Belbari Small Town Water and Sanitation Users Committee
BUWSUA	Baglung Urban Water and Sanitation Users Association
BWSMB	Bharatpur Water Supply Management Board
BWSSUA	Bardghat Water Supply and Sanitation Users Association
BWSSUA	Beljhundi Water Supply and Sanitation Users Association
BWSUA	Beni Water Supply and Sanitation Users Association
BWSSUC	Besishahar Water Supply and Sanitation Users Committee
BWSUC	Bhimad Water Supply and Sanitation Users Committee
CDWSCC	Chainpur Drinking Water and Sanitation Consumer Committee
CWUSC	Chandragadhi Water Users and Sanitation Committee
DBWUSC	Dolakha Bazar Water Users and Sanitation Committee
DDC	District Development Committee
DDWSUC	Dhulikhel Drinking Water and Sanitation Users Committee
DWSPMUC	Duhabi Water Supply Project Main Users Committee
DWSS	Department of Water Supply and Sewerage
DWSSUA	Damauli Water Supply and Sanitation Users Association
DWSUC	Damak Water Supply and Sanitation Users Committee
DWUSC	Dhulabari Water Users and Sanitation Committee
FDWSUA	Fikkal Drinking Water and Sanitation Users Association
GDWUSA	Ghorahi Drinking Water Users and Sanitation Association
GWSUC	Gauradaha Water and Sanitation Users Committee
GWSUSO	Gaindakot Water Supply Users and Sanitation Organization
HWsMB	Hetauda Water Supply Management Board
HWSSUC	Haraicha Water Supply and Sanitation Users Committee
ISTWSSUA	Itahari Small Town Water Supply and Sanitation Users Association
JICA	Japan International Cooperation Agency
KDWCSC	Khajura Drinking Water Consumer and Sanitation Committee
KDWSUC	Karmaiya Drinking Water and Sanitation Users Committee
KSTWSUA	Khairanitar Small Town Water Supply and Sanitation Users Association
KWSSUA	Kawasoti Water Supply and Sanitation Users Association
KWUSA	Kakarvitta Water Users and Sanitation Association
LSTWSSUC	Lekhnath Small Town Water Supply and Sanitation User Committee
LWSSUC	Lamahi Water Supply and Sanitation Users Committee
LWSUC	Lakhanpur Water Supply and Sanitation Users Committee
MoUD	Ministry of Urban Development
MWUSA	Mahendranagar Water Users and Sanitation Association

NRs	Nepali rupee
NRW	non revenue water
NWSC Banepa	Nepal Water Supply Corporation, Banepa
NWSC Bhadrapur	Nepal Water Supply Corporation, Bhadrapur
NWSC Bhairahawa	Nepal Water Supply Corporation, Bhairahawa
NWSC Dhangadhi	Nepal Water Supply Corporation, Dhangadhi
NWSC Gaur	Nepal Water Supply Corporation, Gaur
NWSC Jaleswor	Nepal Water Supply Corporation, Jaleswor
NWSC Krishnanagar	Nepal Water Supply Corporation, Krishnanagar
NWSC Mahendranagar	Nepal Water Supply Corporation, Mahendranagar
NWSC Taulihawa	Nepal Water Supply Corporation, Taulihawa
NWSSTC	National Water Supply and Sanitation Training Centre
NWSUSA	Nayagaun Water Supply Users and Sanitation Association
O&M	operation and maintenance
PNSTDWSUC	Prithvinarayan Small Town Drinking Water & Sanitation Users' Committee
PSTWSSCA	Parsa Small Town Water Supply and Sanitation Consumers' Association
PWSSUC	Pragatinagar Water Supply and Sanitation Users Committee
PWUSC	Pathari Water Users and Sanitation Committee
RWSUA	Ratnanagar Water Supply and Sanitation Users Association
SAWSSUC	Shanischare-Arjundhara Water Supply and Sanitation Users Committee
SEIU	Sector Efficiency Improvement Unit
SEIUC	SEIU Consultants
SWSSC	Sunwal Water Supply and Sanitation Committee
SWSSUA	Surunga Water Supply and Sanitation Users Association
SWSSUC	Salakpur Water Supply and Sanitation Users Committee
SWSUSC	Siddeshwor Water Supply Users and Sanitation Committee
SWUSA	Shankarnagar Water Users and Sanitation Association
SWUSC	Simara Water Users and Sanitation Committee
SWUSO	Shivalaya Water Supply User and Sanitation Organization
TWSSUA	Tulsipur Water Supply and Sanitation Users Association
TWUSC	Tankisinwari Water Supply Users and Sanitation Committee
UWSUSA	Urlabari Water Supply Users and Sanitation Association
VDC	village development committee
WSSDO	Water Supply and Sewerage District Office
WUSC	water users and sanitation committee

Special Note

Following the earthquakes of April 25 and May 12, 2015, SEIU contacted several of the water supply providers in the earthquake affected/risk zone (specifically the upper range of Gandaki and Bagmati zones), to assess their ability to provide safe water supply.

- Dhulikhel WSP: The manager of the Dhulikhel WSP, R Parajuli, reported that the guard house with three store rooms (5 rooms in total) in the compound of the service reservoir are fully damaged and need to be reconstructed. No any other damages occurred and the whole water supply system itself is intact. No disturbances in service delivery has been reported.
- Banepa (NWSC) WSP has seriously been affected. Banepa has been the epicenter of several aftershocks. The In-charge, Niran Maharjan, informed that there is substantial effect due to the earthquake in the Banepa water supply system. The main trunk line is damaged affecting the flow of water. The service reservoir as well as office building are cracked. The NWSC branch office is trying to repair the system on its own and maintain the service. By June 7, 50-60% of damage is repaired and the water supply is restored though –as yet- with lesser less quantity than before the earthquake.
- Dolakha WSP: The technician of Dolakha WSP, Indra Shrestha explained that there are minor cracks in old service reservoir tank and in one of the intakes. It has been inspected by the technical team from MoUD/DWSS and recorded the damages. The cracked storage tank is temporarily replaced by a plastic tank of capacity 30 m³ and service is regularized. Because of depletion of source the quantity of water supplied is substantially reduced. The WTP is functional, no indication of E.coli seen while testing the water sample after WTP. Initially the water was reported to be turbid, which was apparently due to shaking of the filter media layer. Water purification agents for the scheme and for household water treatment are necessary and in short supply.
- Chairman Badri Maskey of Gorkha WSP informed that there are major cracks and damages in the pump house of pumping station # 2 and 3, and minor cracks in station # 1. A consultant team has visited the site and will report to DWSS. The Chairman reported that, despite the cracks in the pumping station and sedimentation tank, supply is continued in various parts of the service area for about one hour every other day.
- The Water Service Providers of Aanbukhareni, Damauli, Bhimad and Besisahar water supply systems reported their schemes as intact. Provision of water supply has not been affected in these schemes.

The Benchmarking exercise that has been going on since early 2013 has raised awareness on operational aspects and has led to some degree of performance improvement of the schemes. More needs to be done in coming years, especially to reinforce the Water Safety Plan approach as part of the performance improvement and business plans that WSP are gradually preparing. Because of the regular contact with the WSPs in the context of the Benchmarking activity, it was also possible to get quick feedback on the status of the schemes after the recent earthquakes.

METHODOLOGY

The *Nepal Water Service Providers Data Book 2070 – 2071 (2013 – 2014)* presents the performance indicators and analysis of the performance of water service providers in 63 VDCs and towns in Nepal. The information contained in this data book is based on the collection of 2013 - 2014 data from each of the participating water service providers. Data were collected using the questionnaire developed by the Sector Efficiency Improvement Unit (SEIU) of MoUD.

The water service providers that provided data are water supply users committees or associations, water supply management boards and branches of the Nepal Water Supply Corporation. For purposes of presentation and discussions, the name of the VDC or municipality/town served by the utility is used instead of the service provider name, for example, Baglung instead of Baglung Urban Water and Sanitation Users Association, Bijuwar instead of Brihat Bijuwar Small Town Drinking Water Users and Sanitation Association, and Hetauda instead of Hetauda Water Supply Management Board. Mahendranagar W and Mahendranagar N refer to the areas served by Mahendranagar Water Users and Sanitation Association and Nepal Water Supply Corporation, Mahendranagar, respectively

Performance indicators were derived using basic data provided by the water service providers and following various computations using the formulas given below. Almost all the data used in comparing the indicators in the tables, graphs, charts, and figures are found in each utility and area profile, hence, exact values can be extracted. The terms utility and water service provider are used interchangeably in this data book.

Clarifications were sought on the data provided especially for consistency between the data and indicators so that the data finally presented are the best that could be obtained under the circumstances. These clarifications were done through the exchange of emails, SMS messages and telephone between the service providers and the SEIU team. Hence, SEIU is conscious that not all data are 100% reliable as pointed out in the presentation of data and the discussions. In some instances, estimates were given in the absence of available measures, such as in cases where there is no total metering of production and consumption. This makes non revenue water or daily per capita consumption data unreliable or estimates at best. If there are doubts on the reliability of some data presented, the reader is advised to verify the information from the concerned water service provider whose contact details are provided in the utility profiles.

The information presented in this book was either taken from the water utility questionnaire or was based on computations using data from the questionnaire. The formulas used for the computations are shown below.

1. Water supply coverage (%)

$$= [(population\ served\ with\ water\ supply) \times 100 / [total\ population\ in\ the\ area\ of\ responsibility]$$

2. Per capita consumption (lpcd)

$$= [total\ annual\ volume\ of\ water\ sold\ (m^3) \times 1,000/365] / [number\ of\ people\ served]$$

3. Production/population ($m^3/day/c$)

$$= [annual\ production\ volume\ (m^3) / 365] / [number\ of\ people\ served]$$

4. Non revenue water (%)

$$= [total\ annual\ production\ (m^3) - total\ billed\ consumption\ (m^3)] \times 100 / [total\ annual\ production\ (m^3)]$$

5. Average tariff (NRs/ m^3)

$$= [total\ annual\ billing\ (NRs)] / [total\ annual\ consumption\ (m^3)]$$

6. Unit production cost (NRs/ m^3)

$$= [annual\ O\&M\ cost\ (NRs)] / [total\ annual\ production\ (m^3)]$$

7. Operating ratio
= [total annual O&M cost (NRs)] / [total annual billing (NRs)]
8. Accounts receivable equivalent (months)
= [accounts receivable (NRs) at end of the fiscal year] / [total annual revenue (NRs)/12]
9. Revenue collection efficiency (%)
= [total annual revenue (NRs)] / [total annual billings (NRs)] x 100
10. Staff/1,000 water connections ratio
= [number of utility staff] / [number of utility connections/1,000]

Some water service providers may have collection efficiency higher than 100% which may indicate that the total collections for the one-year period included payment of bills for the previous period. Most of the service providers have no meter for measuring annual production prior to distribution and annual consumption or billing at the distribution ends, hence, the service providers gave best estimates.

Operating ratio is based on annual billing/sales to find out whether tariff revenues are sufficient to cover the O&M expenses. Other revenues like interests from bank deposits, connection fees and subsidies from government were not included in the computation.

The numbers of people served were based on the data and explanations given by the water service providers. In addition to people served by house connections and public taps, they included people residing in institutions, commercial and other establishments connected to the water supply systems.

This data book is organized in four parts.

Part I provides the summary of the results starting with the table showing the main performance indicators for each of the water service providers. Brief discussions on the performance indicators and the performance highlights of each service provider were followed by the overall performance assessment of the sector and general conclusions with recommendations on performance improvement and institutionalization of benchmarking and performance improvement.

Part II contains the comparison of performance data and indicators among the 63 service providers. These are in the form of charts and tables. The sorted data presented in the charts were divided into two one-page charts facing each other for each performance data or indicator ranked either from highest to lowest values (highest being the best performance as in coverage, per capita consumption and availability in hours per day) or lowest to highest values (lowest being the best performance as in NRW, operating ratio, accounts receivable equivalent). The left page shows the best performing service providers with the right showing the lower performing service providers. The blue colored bars show the median while the green colored bar represents the top quartile with the highest performing ¼ of the service providers.

Part III shows for each service provider the utility profile on the left hand (even numbered) page with the area profile on the right hand (odd numbered) page facing each other. The utility profile contains contact details and brief description of the utility's facilities, institutional and governance structure, tariff structure, priority needs, consumer service and performance highlights. The area profile contains production and distribution data, service connections and service and efficiency indicators. All these data and performance indicators are presented to give a full picture of each service provider that will help the reader of this data book in understanding the performance of each service provider.

Part IV is a section in Nepali text. SEIU has requested the water service providers to prepare a self-description of their scheme or water user association. These will provide some additional perspective to the service providers. Text and some photographs were provided by 20 of the water service providers and included in this data book.

Location of Water Utilities involved in the Benchmarking Process

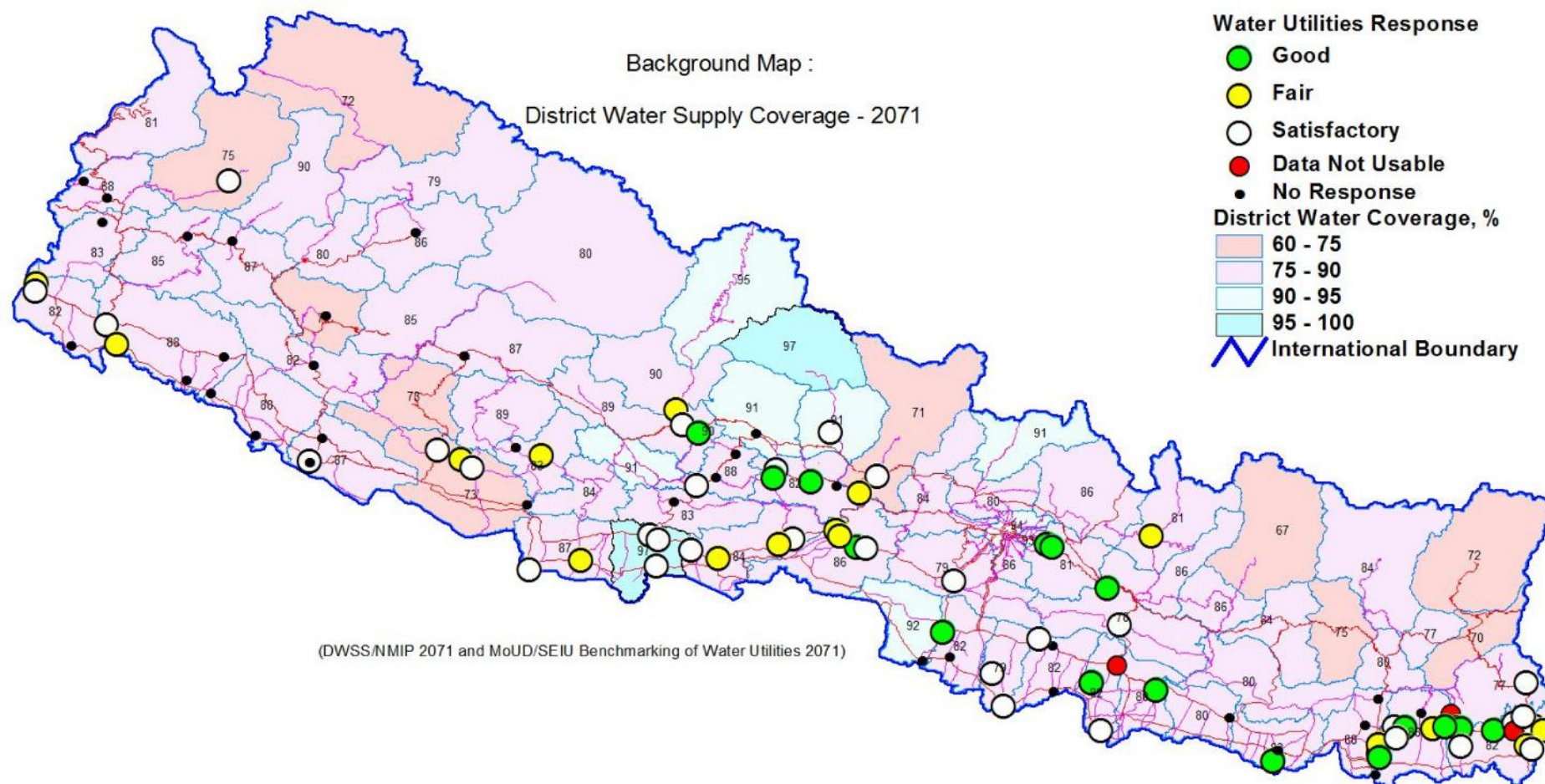


TABLE OF CONTENTS

	Page
Forewords	
Joint Secretary, Ministry of Urban Development	v
Director General, Department of Water Supply and Sewerage	vii
Acknowledgements	viii
Abbreviations	xi
Methodology	xiv
Map of Nepal	xvi
Table of Contents	xvii
List of Tables and Figures	xx
 PART I – SUMMARY OF FINDINGS	 1
Summary of Results for 63 Water Service Providers	3
Comment and Analysis by Service Provider	9
Comment and Analysis by Performance Indicator	23
Overall Performance of Nepal Water Service Providers	25
General Conclusions	26
 PART II – UTILITIES COMPARISONS (Figures and Tables)	 29
Institutions	
Names and Locations of Water Service Providers	30
Size of WSPs	32
Production and Consumption	
Production Volume	34
Water Use	36
Per Capita Consumption	38
Monthly Consumption Per Connection	40
Non Revenue Water	42
Consumer Metering	44
Production Metering	45
Customer Service	
Water Coverage	46
Water Availability(Dry Months)	48
Water Availability (Wet Months)	50
Average Pressure	52
Monthly Bill Per Connection	54
Water Quality Sampling	56
Complaints Received	58
Pipe Leaks Repaired	60
Management	
Operating Ratio	62
Accounts Receivable	64
Revenue Collection Efficiency	66
Staff per 1,000 Connections	68
Tariffs and Costs	
Average Tariff	70

Domestic Tariff Structures	72
Unit Production Cost	78
Connection Fee for Residential Connection	80
Annual Operation and Maintenance Costs	82
O&M Cost Components	84

Priority Needs

Priority Needs of Service Providers	86
-------------------------------------	----

PART III - WATER UTILITY AND AREA PROFILES 89

Aanbukhaireni Water Supply Users and Sanitation Committee	90
Attariya Drinking Water and Sanitation Users Association	92
Baglung Water and Sanitation Users Association	94
Nepal Water Supply Corporation, Banepa	96
Bardghat Water Supply and Sanitation Users Association	98
Belbari Small Town Water and Sanitation Users Committee	100
Beljhundi Water Supply and Sanitation Users Association	102
Beni Water Supply and Sanitation Users Association	104
Besishahar Water Supply and Sanitation Users Committee	106
Nepal Water Supply Corporation, Bhadrapur	108
Nepal Water Supply Corporation, Bhairahawa	110
Bharatpur Water Supply Management Board	112
Bhimad Water and Sanitation Users Committee	114
Brihat Bijubar Small Town Drinking Water Users and Sanitation Association	116
Budhabare Small Town Drinking Water and Sanitation Users Association	118
Chainpur Drinking Water and Sanitation Consumer Committee	120
Chandragadhi Water Users and Sanitation Committee	122
Damak Water and Sanitation Users Association	124
Damauli Water Supply and Sanitation Users Association	126
Nepal Water Supply Corporation, Dhangadhi	128
Dhulabari Water Users and Sanitation Committee	130
Dhulikhel Drinking Water and Sanitation Users Committee	132
Dolakha Bazar Water Users and Sanitation Committee	134
Duhabi Water Supply Project Main Users Committee	136
Fikkal Drinking Water and Sanitation Users Association	138
Gaindakot Water Supply Users and Sanitation Organization	140
Nepal Water Supply Corporation, Gaur	142
Gauradaha Water and Sanitation Users Committee	144
Ghorahi Drinking Water Users and Sanitation Association	146
Haraicha Water Supply and Sanitation Users Committee	148
Hetauda Water Supply Management Board	150
Itahari Small Town Water Supply and Sanitation Users Association	152
Nepal Water Supply Corporation, Jaleswor	154
Kakarvitta Water Users and Sanitation Association	156
Karmaiya Water and Sanitation Users Committee	158
Kawasoti Water Supply and Sanitation Users Association	160
Khairanitar Small Town Water Supply and Sanitation Users Association	162
Khajura Drinking Water Consumer and Sanitation Committee	164
Nepal Water Supply Corporation, Krishnanagar	166
Lakhanpur Water Supply and Sanitation Users Committee	168
Lamahi Water Supply and Sanitation Users Committee	170
Lekhnath Small Town Water Supply and Sanitation User Committee	172
Nepal Water Supply Corporation, Mahendranagar	174

Mahendranagar Water Users and Sanitation Committee	176
Birat/Mangadh Water Supply and Sanitation Users Committee	178
Nayagaun Water Supply Users and Sanitation Association	180
Parsa Small Town Water Supply and Sanitation Consumers' Association	182
Pathari Water Users and Sanitation Committee	184
Pragatinagar Water Supply and Sanitation Users Committee	186
Prithvinarayan Small Town Drinking Water & Sanitation Users' Committee	188
Ratnanagar Water Supply and Sanitation Users Association	190
Salakpur Water Supply and Sanitation Users Committee	192
Shanischare-Arjundhara Water Supply and Sanitation Users Committee	194
Shankarnagar Water Users and Sanitation Association	196
Shivalaya Water Supply User and Sanitation Organization	198
Siddeshwor Water Supply Users and Sanitation Committee	200
Simara Water Users and Sanitation Committee	202
Sunwal Water Supply and Sanitation Committee	204
Surunga Water Supply and Sanitation Users Association	206
Tankisinwari Water Supply Users and Sanitation Committee	208
Nepal Water Supply Corporation, Taulihawa	210
Tulsipur Water Supply and Sanitation Users Association	212
Urlabari Water Supply Users and Sanitation Association	214

PART IV - WATER SERVICE PROVIDER PRESENTATION IN NEPALI 217

आँवुखैरेनी खानेपानी उपभोक्ता तथा सरसफाई समिति, तेनहूँ	219
काँकरभिटा खानेपानी उपभोक्ता तथा सरसफाई संस्था, झापा	220
कावासोती खानेपानी तथा सरसफाई उपभोक्ता संस्था, नवलपरासी	221
खजुरा खानेपानी उपभोक्ता तथा सरसफाई समिति, बाँके	222
गैंडाकोट पम्पिङ्ग स्किम खानेपानी तथा सर- सफाई उपभोक्ता संस्था, नवलपरासी	223
चैनपुर खानेपानी तथा सरसफाई उपभोक्ता समिति, बझाङ्ग	224
टंकिसिनवारी खानेपानी उपभोक्ता तथा सरसफाई समिति, मोरङ्ग	225
दमक खानेपानी तथा सरसफाई उपभोक्ता संस्था, झापा	226
श्री धुलाबारी खानेपानी उपभोक्त समिति, झापा	227
श्री धुलाबारी खानेपानी उपभोक्त समिति, झापा	228
नयाँगाउँ खानेपानी उपभोक्ता तथा सरसफाई संस्था, बुटवल १४	229
फिक्कल खानेपानी तथा सरसफाई उपभोक्ता संस्था, इलाम	230
विजुवार साना शहरी खानेपानी उपभोक्ता तथा सरसफाई संस्था, प्यूठान	231
बेलझुण्डी खानेपानी तथा सरसफाई उपभोक्ता समिति, दाङ	232
बेसीसहर खानेपानी तथा सरसफाई उपभोक्ता समिति, लमजुङ्ग	233
मानगढ खानेपानी आयोजना, विराटनगर- ४	234
शंकरनगर खानेपानी उपभोक्ता तथा सरसफाई संस्था, रुपन्देही	235
शिवालय खानेपानी उपभोक्ता तथा सरसफाई संस्था, पर्वत	236
सिमरा खानेपानी तथा सरसफाई आयोजना, बारा	237
सुनवल खानेपानी उपभोक्ता तथा सरसफाई संस्था, नवलपरासी	238

LIST OF FIGURES AND TABLES

TABLES

Number	Title	Page
1	Summary of Results for 63 Water Service Providers	3
2	Comparison of Overall Performance	26
3	Names and Locations of Utilities	30
4	Size of Utilities	32

FIGURES

Number	Title	Page
1	Production Volume	34
2	Water Use	36
3	Per Capita Consumption	38
4	Monthly Consumption Per Connection	40
5	Non Revenue Water	42
6	Consumer Metering	44
7	Production Metering	45
8	Water Coverage	46
9	Water Availability (Dry Months)	48
10	Water Availability (Wet Months)	50
11	Average Pressure	52
12	Monthly Bill Per Connection	54
13	Water Quality Sampling	56
14	Complaints Received	58
15	Pipe Leaks Repaired	60
16	Operating Ratio	62
17	Accounts Receivable	64
18	Revenue Collection Efficiency	66
19	Staff per 1,000 Connections	68
20	Average Tariff	70
21a	Domestic Tariff Structures (Bhimad, Baglung, Surunga & Damauli, Tulsipur)	72
21b	Domestic Tariff Structures (Siddeshwor, Parsa, Gauradaha, Ratnanagar, Jaleshwar)	72
21c	Domestic Tariff Structures (Prithvinarayan, Dhulikel, Bijumar, Lamahi, Haraicha)	73
21d	Domestic Tariff Structures (Karmaiya, Bardghat, Leknath, Dhulabari, Taulihawa)	73
21e	Domestic Tariff Structures (Ghorahi, Attariya, Urlabari, Fikkal, Beljhundi)	74
21f	Domestic Tariff Structures (Nayagaun, Khairanitar, Mahendranagar W, Salakpur, Pathari)	74
21g	Domestic Tariff Structures (Kakarvitta, Itahari, Damak, Sunwal)	75
21h	Domestic Tariff Structures (Beni, Chandragadhi, Lakhanpur, Kawasoti)	75
21i	Domestic Tariff Structures (Mangadh, Tankisinwari, Budhabare, Belbari)	76
21j	Domestic Tariff Structures (Shivalaya, Pragatinagar, Bharatpur, Gaundakot)	76
21k	Domestic Tariff Structures (Duhabi, Simara, Hetauda, Besishahar)	77
21l	Domestic Tariff Structures (Shankarnagar, Khajura, Aanbukhareni, Shanishare)	77
22	Unit Production Cost	78
23	Connection Fee for Residential Connection	80
24	Annual Operation and Maintenance Costs	82
25	O&M Cost Components	84

PART I
SUMMARY OF FINDINGS

Table 1: Summary of Results for 63 Water Service Providers (a)

	Aanbu khaireni	Attariya	Baglung	Banepa	Bardghat	Average (63)
Water Coverage (%)	66.7	64.5	81.8	41.6	88.8	63.4
Water Availability – Dry months (hours)	24.0	7.0	2.0	1.5	12.0	10.7
Water Availability – Wet months (hours)	24.0	16.0	3.0	1.5	16.0	12.3
Consumption/Capita (lpcd)	60.0	55.0	29.0	54.0	84.0	70.4
Production/Population (m ³ /day/c)	0.066	0.081	0.035	0.068	0.107	0.090
Non Revenue Water (%)	9.5	32.9	16.4	20.8	21.3	21.6
Connections Metered (%)	100.0	100.0	80.0	78.3	100.0	93.4
Operating Ratio	0.83	0.58	0.63	1.85	0.74	1.02
Accounts Receivable (months)	0.3	1.9	1.0	8.1	0.2	1.4
Revenue Collection Efficiency (%)	97.8	97.7	92.1	103.1	98.4	98.6
Average Tariff (NRs/m ³)	9.66	20.12	20.75	14.22	15.30	15.40
New Connection Fee (NRs)	15,000	5,400	15,000	4,155	12,305	10,661
Staff/1,000 Connections (ratio)	8.1	5.7	5.0	10.6	4.7	7.2

Table 1: Summary of Results for 63 Water Service Providers (b)

	Belbari	Beljhundi	Beni	Besishahar	Bhadrapur	Average (32)
Water Coverage (%)	20.0	50.0	64.9	93.3	92.9	63.4
Water Availability – Dry months (hours)	4.0	2.0	12.0	6.0	8.0	10.7
Water Availability – Wet months (hours)	8.0	2.0	24.0	24.0	8.0	12.3
Consumption/Capita (lpcd)	44.0	37.0	77.0	56.0	64.0	70.4
Production/Population (m ³ /day/c)	0.091	0.047	0.083	0.062	0.065	0.090
Non Revenue Water (%)	51.0	20.8	4.4	10.0	1.4	21.6
Connections Metered (%)	96.6	92.1	100.0	100.0	89.2	93.4
Operating Ratio	0.96	1.47	0.48	0.91	2.03	1.02
Accounts Receivable (months)	3.0	3.3	0.6	0.4	2.0	1.4
Revenue Collection Efficiency (%)	75.0	106.3	94.9	104.6	108.9	98.6
Average Tariff (NRs/m ³)	21.96	5.96	24.13	6.54	10.72	15.40
New Connection Fee (NRs)	500	15,215	25,000	4,230	4,155	10,661
Staff/1,000 Connections (ratio)	5.7	10.7	8.7	7.7	11.9	7.2

Table 1: Summary of Results for 63 Water Service Providers (c)

	Bhairahawa	Bharatpur	Bhimad	Bijuwar	Budhabare	Average (63)
Water Coverage (%)	34.2	76.9	94.8	60	49.4	63.4
Water Availability (hours)	7.0	8.0	1.0	1.5	12.0	10.7
Water Availability (hours)	10.0	11.0	2.0	2.0	14.0	12.3
Consumption/Capita (lpcd)	75.0	110.0	55.0	33.0	62.0	70.4
Production/Population (m ³ /day/c)	0.088	0.150	0.069	0.050	0.081	0.090
Non Revenue Water (%)	15.0	26.3	12.6	34.5	24.3	21.6
Connections Metered (%)	99.3	96.9	99.0	100.0	99.2	93.4
Operating Ratio	1.08	0.76	0.67	0.87	1.41	1.02
Accounts Receivable (months)	7.0	2.7	0.8	0.3	2.7	1.4
Revenue Collection Efficiency (%)	88.2	94.5	93.5	102.1	103.1	98.6
Average Tariff (NRs/m ³)	9.22	10.69	16.81	25.00	14.50	15.40
New Connection Fee (NRs)	1,980	4,000	20,000	20,000	9,000	10,661
Staff/1,000 Connections (ratio)	7.6	3	4.3	12.3	4	7.2

Table 1: Summary of Results for 63 Water Service Providers (d)

	Chainpur	Chandragadhi	Damak	Damauli	Dhangadhi	Average (32)
Water Coverage (%)	52	86.8	76.9	81.5	40.9	63.4
Water Availability – Dry months (hours)	1.0	12.0	24.0	4.0	11.0	10.7
Water Availability – Wet months (hours)	2.0	12.0	24.0	6.0	15.0	12.3
Consumption/Capita (lpcd)	37.0	96.0	62.0	78.0	66.0	70.4
Production/Population (m ³ /day/c)	0.038	0.165	0.069	0.088	0.085	0.090
Non Revenue Water (%)	5.0	41.9	10.7	11.2	21.9	21.6
Connections Metered (%)	-	99.9	100.0	100.0	94.4	93.4
Operating Ratio	1.15	0.77	0.65	0.72	0.89	1.02
Accounts Receivable (months)	2.1	0.5	0.3	0.3	1.2	1.4
Revenue Collection Efficiency (%)	101.4	102.2	97.2	97.6	89.8	98.6
Average Tariff (NRs/m ³)	12.19	15.05	15.27	14.20	9.41	15.40
New Connection Fee (NRs)	10,000	6,330	15,000	10,125	4,200	10,661
Staff/1,000 Connections (ratio)	8.9	5.2	3.9	5.2	4.7	7.2

Table 1: Summary of Results for 63 Water Service Providers (e)

	Dhulabari	Dhulikel	Dolakha	Duhabi	Fikkal	Average (63)
Water Coverage (%)	81.3	97.4	80	28.2	50	63.4
Water Availability – Dry months (hours)	10.0	6.0	2.0	9.0	24.0	10.7
Water Availability – Wet months (hours)	24.0	6.0	4.0	10.0	24.0	12.3
Consumption/Capita (lpcd)	70.0	61.0	120.0	181.0	49.0	70.4
Production/Population (m ³ /day/c)	0.074	0.078	0.127	0.208	0.078	0.090
Non Revenue Water (%)	5.9	22.0	5.1	12.6	37.3	21.6
Connections Metered (%)	98.7	99.0	-	99.3	100.0	93.4
Operating Ratio	1.12	0.67	0.77	0.78	0.58	1.02
Accounts Receivable (months)	1.3	1.3	1.8	0.5	0.8	1.4
Revenue Collection Efficiency (%)	110.6	100.0	84.9	95.7	105.5	98.6
Average Tariff (NRs/m ³)	15.00	37.62	3.81	11.34	30.66	15.40
New Connection Fee (NRs)	5,075	8,600	7,000	5,400	10,000	10,661
Staff/1,000 Connections (ratio)	8.1	10	29.8	7.2	8.9	7.2

Table 1: Summary of Results for 63 Water Service Providers (f)

	Gaindakot	Gaur	Gauradaha	Ghorahi	Haraicha	Average (32)
Water Coverage (%)	80	73.5	45.1	75.4	42.8	63.4
Water Availability – Dry months (hours)	24.0	7.0	24.0	2.0	20.0	10.7
Water Availability – Wet months (hours)	24.0	7.0	24.0	3.0	18.0	12.3
Consumption/Capita (lpcd)	159.0	57.0	55.0	58.0	44.0	70.4
Production/Population (m ³ /day/c)	0.187	0.076	0.099	0.075	0.069	0.090
Non Revenue Water (%)	15.0	25.5	44.9	22.4	36.9	21.6
Connections Metered (%)	100.0	90.4	100.0	95.0	100.0	93.4
Operating Ratio	0.72	2.60	1.42	0.77	1.20	1.02
Accounts Receivable (months)	-	2.9	0.4	0.4	0.2	1.4
Revenue Collection Efficiency (%)	100.0	75.7	100.4	96.2	98.1	98.6
Average Tariff (NRs/m ³)	5.05	9.75	16.01	24.82	11.73	15.40
New Connection Fee (NRs)	11,175	3,725	6,000	30,035	9,000	10,661
Staff/1,000 Connections (ratio)	2.3	15.5	4.8	5.1	5.6	7.2

Table 1: Summary of Results for 63 Water Service Providers (g)

	Hetauda	Itahari	Jaleswor	Kakarvitta	Karmaiya	Average (63)
Water Coverage (%)	83.3	66.7	29.8	72.5	86.7	63.4
Water Availability – Dry months (hours)	3.5	10.0	8.3	21.0	6.0	10.7
Water Availability – Wet months (hours)	4.5	14.0	8.3	24.0	7.0	12.3
Consumption/Capita (lpcd)	83.0	76.0	48.0	59.0	39.0	70.4
Production/Population (m ³ /day/c)	0.115	0.087	0.069	0.066	0.060	0.090
Non Revenue Water (%)	27.9	12.7	30.1	11.2	34.7	21.6
Connections Metered (%)	95.0	100.0	75.6	100.0	99.8	93.4
Operating Ratio	0.88	0.95	2.71	0.70	1.19	1.02
Accounts Receivable (months)	2.4	0.2	5.5	1.1	4.0	1.4
Revenue Collection Efficiency (%)	118.1	104.7	109.2	100.0	110.8	98.6
Average Tariff (NRs/m ³)	11.65	10.09	10.45	22.33	13.44	15.40
New Connection Fee (NRs)	7,375	10,525	4,175	11,500	5,130	10,661
Staff/1,000 Connections (ratio)	4	3.3	21.4	6.3	4.6	7.2

Table 1: Summary of Results for 63 Water Service Providers (h)

	Kawasoti	Khairanitar	Khajura	Krishnanagar	Lakhanpur	Average (32)
Water Coverage (%)	90.6	93.5	31.1	60	33.2	63.4
Water Availability – Dry months (hours)	8.0	3.0	8.0	3.0	24.0	10.7
Water Availability – Wet months (hours)	10.0	6.0	8.0	3.0	24.0	12.3
Consumption/Capita (lpcd)	56.0	72.0	112.0	62.0	67.0	70.4
Production/Population (m ³ /day/c)	0.073	0.095	0.153	0.083	0.084	0.090
Non Revenue Water (%)	23.5	14.1	26.7	26.0	20.0	21.6
Connections Metered (%)	99.8	100.0	100.0	93.0	100.0	93.4
Operating Ratio	1.10	0.48	0.96	2.01	0.83	1.02
Accounts Receivable (months)	1.1	0.1	1.9	1.7	-	1.4
Revenue Collection Efficiency (%)	101.6	97.9	99.0	80.6	100.0	98.6
Average Tariff (NRs/m ³)	15.08	16.96	12.05	7.86	11.48	15.40
New Connection Fee (NRs)	15,925	20,000	3,560	4,275	7,000	10,661
Staff/1,000 Connections (ratio)	4.1	4.7	10.2	15.5	2.8	7.2

Table 1: Summary of Results for 63 Water Service Providers (i)

	Lamahi	Leknath	Mahendranagar NWSC	Mahendranagar WUSC	Mangadh	Average (63)
Water Coverage (%)	49.8	76.5	32.2	66.7	43.9	63.4
Water Availability – Dry months (hours)	8.0	14.0	8.5	10.0	10.0	10.7
Water Availability – Wet months (hours)	12.0	14.0	7.5	8.0	10.0	12.3
Consumption/Capita (lpcd)	95.0	68.0	111.0	70.0	56.0	70.4
Production/Population (m ³ /day/c)	0.135	0.100	0.131	0.089	0.064	0.090
Non Revenue Water (%)	30.0	31.5	15.5	21.0	12.0	21.6
Connections Metered (%)	100.0	100.0	83.3	59.4	100.0	93.4
Operating Ratio	0.71	0.46	1.64	0.98	0.84	1.02
Accounts Receivable (months)	0.2	0.7	0.5	1.9	0.4	1.4
Revenue Collection Efficiency (%)	98.5	97.4	100.3	84.4	96.5	98.6
Average Tariff (NRs/m ³)	14.29	17.74	9.03	10.81	16.17	15.40
New Connection Fee (NRs)	20,135	19,075	4,275	3,960	1,250	10,661
Staff/1,000 Connections (ratio)	9.6	3.6	9.1	5.4	3.7	7.2

Table 1: Summary of Results for 63 Water Service Providers (j)

	Nayagaun	Parsa	Pathari	Pragatinagar	Prithvi narayan	Ratnanagar	Average (32)
Water Coverage (%)	80.4	64.8	21.3	96.5	84.9	50	63.4
Water Availability – Dry months (hours)	24.0	24.0	6.0	16.0	5.0	10.0	10.7
Water Availability – Wet months (hours)	24.0	24.0	6.0	16.0	8.0	10.0	12.3
Consumption/Capita (lpcd)	131.0	70.0	48.0	84.0	56.0	94.0	70.4
Production/Population (m ³ /day/c)	0.145	0.082	0.043	0.126	0.083	0.106	0.090
Non Revenue Water (%)	10.0	14.4	37.7	33.3	32.4	11.9	21.6
Connections Metered (%)	98.5	100.0	100.0	97.6	100.0	99.4	93.4
Operating Ratio	0.97	0.48	1.67	1.06	1.11	0.49	1.02
Accounts Receivable (months)	0.4	2.6	0.6	1.2	1.2	0.8	1.4
Revenue Collection Efficiency (%)	96.4	130.1	95.3	100.0	99.0	94.7	98.6
Average Tariff (NRs/m ³)	6.67	20.57	14.18	11.82	47.47	16.84	15.40
New Connection Fee (NRs)	15,000	11,460	7,775	11,040	43,000	8,250	10,661
Staff/1,000 Connections (ratio)	3.6	4.7	4.3	4.2	10.7	2.4	7.2

Table 1: Summary of Results for 63 Water Service Providers (k)

	Salakpur	Shanischare	Shankarnagar	Shivalaya	Siddeshwor	Simara	Average (63)
Water Coverage (%)	52	60	79.1	97.2	68.8	50	63.4
Water Availability – Dry months (hours)	13.5	24.0	24.0	8.0	1.0	5.0	10.7
Water Availability – Wet months (hours)	13.5	24.0	24.0	9.0	1.0	7.0	12.3
Consumption/Capita (lpcd)	43.0	63.0	101.0	93.0	30.0	125.0	70.4
Production/Population (m ³ /day/c)	0.047	0.092	0.126	0.142	0.038	0.154	0.090
Non Revenue Water (%)	9.0	32.0	19.5	34.7	20.0	19.4	21.6
Connections Metered (%)	100.0	100.0	100.0	100.0	77.7	97.8	93.4
Operating Ratio	1.11	0.96	0.60	0.61	0.50	0.95	1.02
Accounts Receivable (months)	-	1.3	0.1	1.0	2.3	1.8	1.4
Revenue Collection Efficiency (%)	100.0	88.8	99.4	103.6	85.9	125.8	98.6
Average Tariff (NRs/m ³)	15.23	14.80	10.84	17.23	15.07	8.95	15.40
New Connection Fee (NRs)	9,000	8,100	15,000	29,500	9,920	8,000	10,661
Staff/1,000 Connections (ratio)	5	5.9	3.5	8.4	6.9	6.5	7.2

Table 1: Summary of Results for 63 Water Service Providers (l)

	Sunwal	Surunga	Tankisinwari	Taulihawa	Tulsipur	Urlabari	Average (32)
Water Coverage (%)	63	57.8	26.2	28	77.8	48.9	63.4
Water Availability – Dry months (hours)	12.0	24.0	11.0	5.0	4.0	24.0	10.7
Water Availability – Wet months (hours)	10.0	24.0	11.0	5.0	4.0	24.0	12.3
Consumption/Capita (lpcd)	27.0	65.0	74.0	73.0	33.0	62.0	70.4
Production/Population (m ³ /day/c)	0.051	0.072	0.085	0.094	0.049	0.067	0.090
Non Revenue Water (%)	47.7	9.4	12.4	22.2	32.9	7.5	21.6
Connections Metered (%)	100.0	100.0	98.5	99.1	100.0	99.8	93.4
Operating Ratio	0.69	0.44	1.26	3.14	0.72	0.84	1.02
Accounts Receivable (months)	1.0	0.7	1.8	0.5	0.8	0.3	1.4
Revenue Collection Efficiency (%)	95.0	94.0	85.2	110.5	93.4	97.1	98.6
Average Tariff (NRs/m ³)	28.82	27.68	13.50	5.95	21.42	15.95	15.40
New Connection Fee (NRs)	10,010	8,500	3,000	4,215	20,500	13,600	10,661
Staff/1,000 Connections (ratio)	6.7	4.4	6.7	11.1	7.2	5.8	7.2

COMMENT AND ANALYSIS BY SERVICE PROVIDER

Aanbukhaireni Water Supply Users and Sanitation Committee

Aanbukhaireni Water Supply Users and Sanitation Committee provides water at 60 lpcd to its consumers for an average of 24 hours per day during both dry and wet months to 66.7% of the population in its service area. NRW of 9.5% looks good but with production not metered and consumption fully metered, the NRW value is questionable. Financial management is good with operating ratio of 0.83 and accounts receivable equivalent of 0.3 month although collection efficiency of 97.8% needs some improvement. Average tariff of NRs9.66/m³ is in the lowest quartile yet enough to cover O&M expenses. Staff/1000 connections ratio at 8.1 is a little below the average. AWSUSC's priority should be additional sources of water to increase water provided to its customers and to increase coverage as well. It should also meter its production to have a more accurate determination of non revenue water. The service provider should also invest on training its staff for greater productivity and efficiency.

Attariya Drinking Water and Sanitation Users Association

Attariya Drinking Water and Sanitation Users Association provides water at 55 lpcd to its consumers for an average of 7 hours per day during the dry months and 16 hours per day in the wet months to 64.5% of the population in its service area. NRW of 32.9% is among the highest with consumption and production fully metered. Operating ratio is eighth lowest at 0.58, accounts receivable equivalent is 1.9 months while collection efficiency at 97.7% is lower than average. Average tariff of NRs20.12/m³ is at the top quartile and is more than enough to raise revenues to cover O&M costs but not debt service. Staff/1000 connections ratio at 5.7 is better than the average. ADWSUA will have to develop new sources to increase water supply to customers and expand coverage which may require increasing tariff. Reducing NRW should be a priority as it can augment present sources. Financial management should be improved with timely collection of all its bills. ADWSUA should monitor its residual chlorine according to national drinking water standards.

Baglung Urban Water and Sanitation Users Association

Baglung Urban Water and Sanitation Users Association provides water at only 29 lpcd to its consumers for an average of 2 hours per day in the dry months and 3 hours per day in the wet months to 81.8% of the population in its service area. NRW of 16% is less than the average with production not metered although consumption is 80% metered. Financial management is

good with operating ratio at 0.63 in the top quartile, accounts receivable equivalent of 1.0 month although collection efficiency of 92.1% can still be improved. Average tariff of NRs20.75/m³ is among the top quartile allowing it to cover its expenses well from revenues. Staff/1000 connections ratio at 5.0 is good, better than the average. The service provider may have to increase tariff to allow it to increase water availability to more than 2-3 hours per day and increase the amount of water provided to its consumers which is second lowest. BUWSUA also needs to fully meter its production and all its connections to have a more accurate determination of unaccounted for water. It should monitor its residual chlorine to be able to check on effectiveness of its disinfection measures.

Nepal Water Supply Corporation, Banepa

Nepal Water Supply Corporation, Banepa provides water at 54 lpcd to its consumers for an average of only 1.5 hours per day throughout the year to 41.6% of the population in its service area. NRW of 20.8% is less than the average with production not metered and consumption only 78.3% metered making the NRW value questionable. Financial management needs improvement with operating ratio at 1.85, accounts receivable equivalent of 8.1 months although collection efficiency is 103.1% suggesting collection of arrears. Average tariff of NRs14.22/m³ is just below average but not enough to cover operating expenses. Staff/1000 connections ratio at 10.6 is tenth highest. The service provider may have to develop new sources to provide more water to customers, expand services to more people and extend water availability. Tariff may have to be increased for revenues to cover operating expenses and bills have to be collected in time. Other areas for improvement are training of staff and monitoring of residual chlorine to check effectiveness of disinfection measures.

Bardghat Water Supply and Sanitation Users Association

Bardghat Water Supply and Sanitation Users Association provides water at 84 lpcd to its consumers for an average of 12 hours per day during the dry months and 16 hours per day in the wet months to 88.8% of the population in its service area. NRW of 21.3% is just about average with consumption fully metered but not for production rendering the NRW value unreliable. Financial management is good with operating ratio of 0.74, accounts receivable equivalent of 0.2 month and collection efficiency of 98.4%. Average tariff of NRs15.30/m³ is about average which is more than enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 4.7 is good and just about the top quartile. With a low operating ratio, BWSSUA may be able to develop new sources to increase water supply to

customers and expand coverage with some increase in tariff. It should also meter its production to have a better determination of its losses. BWSSUA should monitor residual chlorine according to the national drinking water quality standards.

Belbari Small Town Water and Sanitation Users Committee

Belbari Small Town Water and Sanitation Users Committee provides water at only 44 lpcd to its consumers, way below the average, for an average of 4 hours per day in the dry months and 8 hours in the wet months to 20% of the population, the lowest coverage. NRW of 51% is the highest with production fully metered and consumption 96.6% metered. Except for operating ratio of 0.96, financial management needs improvement with accounts receivable equivalent of 3 months and the lowest collection efficiency of 75%. Average tariff of NRs21.96/m³ is in the top quartile but barely enough to cover O&M expenses. Staff/1000 connections ratio at 5.7 is better than average. The service provider needs to raise water availability to more than 8 hours per day, the amount of water provided its customers and expand service to more people. BSTWSUC needs to collect all of its water bills and on time as well. Priority should be in reducing its water losses which may be one way of increasing water supplied to customers and increasing its coverage. The service provider should consider increasing the number of water samples tested for residual chlorine according to national drinking water quality standards.

Beljhundi Water Supply and Sanitation Users Association

Beljhundi Water Supply and Sanitation Users Association provides water at 37 lpcd to its consumers for an average of only 2 hours per day throughout the year to 50% of the population in its service area. NRW of 20.8% is just below the average with consumption 92.1% metered but none for production rendering the NRW value unreliable. Operating ratio is ninth highest at 1.47, accounts receivable equivalent fifth highest at 3.3 months and collection efficiency at 106.3% suggests collection of past arrears. Average tariff of NRs5.96/m³ is fourth lowest which is not enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 10.7 is eighth highest. BWSSUA needs to develop new sources to increase water supply to customers for longer hours and expand coverage which will require increasing tariff. It should also meter its production and all connections to have a better determination of its losses. BWSSUA should send its staff to training courses to develop their capacity and increase their productivity.

Beni Water Supply and Sanitation Users Association

Beni Water Supply and Sanitation Users Association provides water at 77 lpcd to its consumers for an average of 12-24 hours per day to 64.9% of the population in its service area. NRW of 4% is second lowest but with production not metered although consumption is 100% metered, NRW is at best an estimate. Financial management is good with third lowest operating ratio of 0.48 and accounts receivable equivalent of 0.6 month although collection efficiency of 94.9% could still be improved. Average tariff of NRs24.13/m³ is in the top quartile and is more than enough for revenues to cover O&M expenses and debt service adequately. Staff/1000 connections ratio at 8.7 is however much higher than average. There might be a need to increase tariff to develop new sources for BWSUA to increase water provided to its consumers and increase its coverage. BWSUA also needs to meter its production to have a more accurate determination of its water losses. It can provide training for its staff to improve their productivity.

Besishahar Water Supply and Sanitation Users Committee

Besishahar Water Supply and Sanitation Users Committee provides water at only 56 lpcd to its consumers for an average of 6 hours per day during the dry months and 24 hours per day in the wet months to 93.3% of the population in its service area. NRW of 10% is tenth lowest with consumption fully metered but not for production rendering the NRW value unreliable. Financial management is good with operating ratio of 0.91, accounts receivable equivalent of 0.4 month and collection efficiency of 104.6% which indicates collection of past arrears. Average tariff of NRs6.54/m³ is fifth lowest but is enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 7.7 is a little higher than the average. BWSUC may have to develop new sources to increase water supply to customers with some increase in tariff. The service provider should consider buying a power generator or build an overhead storage tank in the distribution network to extend water availability to more than 6 hours per day. Additional tariff can be afforded considering its present low tariff. It should also meter its production to have a better determination of its losses. BWSUC should monitor residual chlorine to check on the effectiveness of its disinfection measures.

Nepal Water Supply Corporation, Bhadrapur

NWSC Bhadrapur provides water at 64 lpcd to its consumers for an average of 8 hours per day throughout the year to 92.9% of the population in its service area. NRW of 1.4% is the lowest but with production not metered and consumption only 89.2% metered rendering the NRW value unreliable. Financial management needs improvement with fourth highest operating ratio of 2.03, accounts receivable equivalent of 2.0 months and collection efficiency of 108.9% which suggests collection of past arrears. Average tariff of NRs10.72/m³ is almost

among the lowest quartile and not enough to cover O&M expenses. Staff/1000 connections ratio at 11.9 is sixth highest. The service provider may have to develop new sources since the per capita consumption is very close to the limit of production. There is room for tariff increase with the present low average tariff and the need to cover O&M expenses. NWSC Bhadrapur should fully meter its production and all connections to better determine its NRW.

Nepal Water Supply Corporation, Bhairahawa

NWSC Bhairahawa provides water at 75 lpcd to its consumers for an average of 7 hours per day in the dry months and 10 hours per day in the wet months to 34.2% of the population in its service area. NRW of 15% is lower than average with production not metered and consumption 99.3% metered rendering its value unreliable. Financial management needs improvement with operating ratio at 1.08, accounts receivable equivalent of 7 months and collection efficiency of 88.2%. Average tariff of NRs9.22/m³ is tenth lowest and not enough to cover O&M expenses. Staff/1000 connections ratio at 7.6 is higher than the average. Tariff need to be increased for revenues to cover O&M expenses unless expenses can be reduced. Bills need to be collected as well in a timely manner. The service provider may have to develop new sources to increase coverage and to provide adequate supply to customers. Testing for residual chlorine should be adequate in frequency and number of samples. NWSC Bhairahawa should send more staff to training courses to develop their capacity. Production should be metered.

Bharatpur Water Supply Management Board

Bharatpur Water Supply Management Board provides water at 110 lpcd to its consumers for an average of 8 hours per day in the dry months and 11 hours per day in the wet months to 76.9% of the population in its service area. NRW of 26.3% is higher than the average with consumption 96.9% metered but none for production rendering the NRW value unreliable. Operating ratio is good at 0.76, but accounts receivable equivalent of 2.7 months and collection efficiency of 94.5% need improvement. Average tariff of NRs10.69/m³ is at the bottom quartile but is more than enough for revenues to cover O&M costs. Staff/1000 connections ratio is good at 3.0, the fourth lowest. While providing more than adequate water to consumers, BWSMB may need to develop new sources to increase expand coverage. The service provider should collect all bills in a timely manner. It should also meter its production to have a better determination of its losses. BWSMB should be mindful of the residual chlorine content of the water it is distributing. Other areas for improvement are reduction of NRW and longer water availability.

Bhimad Water Supply and Sanitation Users Committee

Bhimad Water Supply and Sanitation Users Committee provides water at 55 lpcd to its consumers for averages of 1 hour per day in the dry months and 2 hours per day in the wet months, among the first and third lowest, respectively, to 94.8% of the population in its service area. NRW of 12.6% is almost at the lowest quartile but production is not metered and consumption is 99% metered making the NRW value an estimate at best. Financial management is good with operating ratio of 0.67, accounts receivable equivalent of 0.8 month and collection efficiency of 93.5%. Average tariff of NRs16.81/m³ is just below the top quartile, enough to provide revenues to cover O&M expenses. Staff/1000 connections ratio at 4.3 is good at the top quartile. BWSUC will have to develop new sources to increase water availability to more than 2 hours per day and the amount of water provided to its consumers. Full metering of its production and all connections will give a more accurate determination of its losses. It may also want to consider sending its staff to training to develop their capabilities. Monitoring of residual chlorine will allow the service provider determine the effectiveness of its disinfection treatment.

Brihat Bijuwar Small Town Drinking Water Users and Sanitation Association

Brihat Bijuwar Small Town Drinking Water Users and Sanitation Association provides water at only 33 lpcd to its consumers, the fourth lowest, for an average of 1.5 - 2 hours per day during the dry and wet months, respectively, to 60% of the population in its service area. NRW of 34.5% is in the bottom quartile with consumption fully metered but not for production rendering the NRW value unreliable. Financial management is good with operating ratio of 0.87, accounts receivable equivalent of 0.3 month and collection efficiency of 102.1%. Average tariff of NRs25.00/m³ is sixth highest; enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 12.3 is fifth highest. BBSTDWUSA has to do more for its customers by developing new sources to increase water supply to them and expand coverage to others. The service provider could extend water availability by investing in power generators or additional overhead storage in the network. It should also meter its production to have a better determination of its losses to address it properly. BBSTDWUSA should send more staff to training courses and monitor residual chlorine with more samples tested according to national drinking water standards.

Budhabare Small Town Drinking Water and Sanitation Users Association

Budhabare Small Town Drinking Water and Sanitation Users Association provides water at 62 lpcd to its consumers for an average of 12 hours per day in the dry months and 14 hours per day in the wet months to 49.4% of the population in its service area. NRW of 24.3% is higher than the average with consumption 99.2% metered and production only 75% metered rendering the NRW value unreliable. Operating ratio is in the bottom quartile at 1.41, accounts receivable equivalent at 2.7 months is eighth highest although collection efficiency at 103.1% suggests efforts at collecting past arrears. Average tariff of NRs14.50/m³ is lower than the average and is not enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 4.0 is good and is in the top quartile. The service provider should address its financial management by increasing tariff to collect enough revenues and collect them in time. BSTDWSUA should develop new sources to increase water supply to customers and expand coverage. It should also meter all connections to have a better determination of its losses to address it properly. BSTDWSUA should send its staff to training courses and monitor residual chlorine adequately according to the national drinking water standards.

Chainpur Drinking Water and Sanitation Consumer Committee

Chainpur Drinking Water and Sanitation Consumer Committee provides water at only 37 lpcd to its consumers for an average of only 1 hour per day in the dry months and 2 hours per day in the wet months to 52% of the population in its service area. NRW of 5% should be good at third lowest but consumption and production are not metered at all rendering the NRW value questionable. Operating ratio at 1.15 and accounts receivable equivalent of 2.1 months are both in the bottom quartile although collection efficiency at 101.4% is good with some efforts in collecting past arrears. Average tariff of NRs12.19/m³ is not enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 8.9 is at the bottom quartile. CDWSCC should prioritize development of new sources to increase water supply to customers and expand coverage and procuring power generators to extend water availability to more than 2 hours per day. Tariffs may have to be raised for revenues to cover O&M expenses and bills should be collected in time. It should fully meter its production and all connections to have a better determination of its losses. CDWSCC should send its staff to training courses to develop their capacity and monitor residual chlorine to check on effectiveness of its disinfection measures.

Chandragadhi Water Users and Sanitation Committee

Chandragadhi Water Users and Sanitation Committee provides water at 96 lpcd to its consumers for an average of 12 hours per day during both dry and wet months to 86.8% of the population in its service area. NRW of 42% is the fourth highest with production not metered although consumption is almost totally metered at 99.9% making NRW an estimate at best. Financial management is good with operating ratio of 0.77, accounts receivable equivalent of 0.5 month and collection efficiency of 102.2% which may include collection of some past arrears. Average tariff of NRs15.05/m³ is just above average but enough to cover O&M expenses. Staff/1000 connections ratio at 5.2 is better than the average. CWUSC's priority should be reduction of its water losses. Additional revenues from NRW reduction can be used to expand services to more people and provide longer hours of supply. It should also meter its production to have a more accurate determination of NRW to be able to address it well. The service provider should also invest on training its staff for greater productivity and efficiency. Monitoring of residual chlorine can help CWUSC check on the effectiveness of its disinfection measures.

Damak Water Supply and Sanitation Users Committee

Damak Water Supply and Sanitation Users Committee provides water at 62 lpcd to its consumers for an average of 24 hours per day during both dry and wet months to 76.9% of the population in its service area. NRW of 11% is in the top quartile and good with both production and consumption 100% metered. Financial management is good with operating ratio at 0.65 and accounts receivable equivalent of 0.3 month although collection efficiency is 97.2%. Average tariff of NRs15.27/m³ is a little less than the average but is enough to cover O&M costs. Staff/1000 connections ratio is good at 3.9 which is in the top quartile. A customer service gap is the low coverage and per capita consumption which should be improved. The service provider may have to develop new sources which may require increasing tariff. The service provider should collect and test more water samples for residual chlorine according to the national drinking water standard to check on the effectiveness of its disinfection measures.

Damauli Water Supply and Sanitation Users Association

Damauli Water Supply and Sanitation Users Association provides water at 78 lpcd to its consumers for an average of only 4 - 6 hours per day during the dry and wet months, respectively, to 81.5% of the population in its service area. NRW of 11% is in the top quartile although production is not metered and consumption is fully metered making the NRW figure an estimate at best. Financial management is good with operating ratio at 0.72, accounts receivable equivalent of 0.3 month and collection efficiency of 97.6%. Average tariff of NRs14.20/m³ is just below the average but sufficient enough for revenues to cover O&M costs. Staff/1000

connections ratio at 5.2 is below the average. The service provider may have to buy a backup power generator or add elevated water storage to provide water at more than 6 hours per day as others have done. DWSSUA also needs to meter its production to have a more accurate determination of NRW. The number of water samples for residual chlorine tests may also have to be increased according to the national drinking water standards. It may also need to invest in training its staff to increase their productivity.

Nepal Water Supply Corporation, Dhangadhi

NWSC Dhangadhi provides water at 66 lpcd to its consumers for an average of 11 hours per day in the dry months and 15 hours per day in the wet months to only 40.9% of the population in its service area. NRW of 21.9% is just above the average with production not metered and consumption 94.4% metered rendering the NRW value questionable. Financial management is mixed with operating ratio at 0.89, accounts receivable equivalent of 1.2 months and collection efficiency of only 89.8%. Average tariff of NRs9.41/m³ is in the bottom quartile but enough to cover operating expenses. Staff/1000 connections ratio at 4.7 is just below the top quartile. The service provider may have to develop new sources to increase supply to customers and extend services to more people in its service area. Water availability can be increased with a purchase of power generators. These will entail increasing the present tariff. NWSC Dhangadhi should send more staff to training courses to develop their capacity and increase their productivity. It also needs to monitor residual chlorine to check the effectiveness of disinfection.

Dhulabari Water Users and Sanitation Committee

Dhulabari Water Users and Sanitation Committee provides water at 70 lpcd to its consumers for an average of 10 hours per day in the dry months and 24 hours per day in the wet months to 81.3% of the population in its service area. NRW of 5.9% is fifth lowest with consumption 98.7% metered but none for production rendering the NRW value unreliable. Operating ratio at 1.12 and accounts receivable equivalent at 1.3 months both need improvement. Collection efficiency of 110.6% suggests efforts in collecting past arrears. Average tariff of NRs15.00/m³ while just above the median is not enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 8.1 is higher than the average. DWUSC may have to increase tariffs for revenues to cover O&M expenses. It should spend some effort in collecting bills on time. While amount of per capita supply and coverage is not bad, the service provider can extend water availability with power generators when needed. It should meter its production to have a better determination of its losses. DWUSC should send its staff to training courses to develop their capacity and increase their productivity.

Dhulikhel Drinking Water and Sanitation Users Committee

Dhulikhel Drinking Water and Sanitation Users Committee provides water at 61 lpcd to its consumers for an average of 6 hours per day throughout the year to 97.4% of the population in its service area. NRW of 22% is just above the average with consumption 99% metered but not for production rendering the NRW value unreliable. Operating ratio is in the top quartile at 0.67 and collection efficiency at 100% is good but accounts receivable equivalent at 1.3 months needs some improvement. Average tariff of NRs37.62/m³ is second highest which is more than enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 10.0 is in the bottom quartile. DDWSUC's priority should be in increasing supply to its customers and extending water availability which will require additional sources and the use of power generators. It should meter its production to have a better determination of its NRW to properly find ways to reduce it. DDWSUC should send more staff to training courses to develop their capacity and increase their productivity.

Dolakha Bazar Water Users and Sanitation Committee

Dolakha Bazar Water Users and Sanitation Committee provides water at 120 lpcd to its consumers for an average of 2 hours per day in the dry months and 4 hours per day in the wet months to 80% of the population in its service area. NRW of 5.1% is good at fourth lowest but consumption and production are not metered rendering the NRW value highly questionable. While operating ratio is good at 0.77, accounts receivable equivalent at 1.8 months and collection efficiency of 84.9% need improvement. Average tariff of NRs3.81/m³ is the lowest but is more than enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 29.8 is the highest considering that it has the smallest number of connections. While it provides adequate supply per capita, DBWUSC needs to extend water availability to more than 2-4 hours per day and to more people in its service area. It should also meter its production and connections to have a better determination of its losses. Bills should be collected and in time. With its low tariff, this can be raised to accommodate improvements in service. DBWUSC should send its staff to training courses to develop their capacity. It should monitor residual chlorine to check the effectiveness of its disinfection measures.

Duhabi Water Supply Project Main Users Committee

Duhabi Water Supply Project Main Users Committee provides the highest amount of water at 181 lpcd to its consumers for an average of 9 hours per day in the dry months and 10 hours per day in the wet months to only 28.2% of the population in its service area, the fifth lowest. NRW of 13% is almost in the top quartile but while consumption is 99.3% metered, production is not

metered making the NRW an estimate at best. Financial management is fine with operating ratio at 0.78 and accounts receivable equivalent of 0.5 month except for 95.7% collection efficiency. Average tariff of NRs11.34/m³ is just outside the bottom quartile but is enough to cover O&M expenses. Staff/1000 connections ratio at 7.2 is equal to the average. It is ironic that coverage is just above ¼ of the service area population and yet the service provider is supplying the highest supply per capita which may be due to tubewells used by those not connected. The low tariff may also be a reason for high per capita consumption. DWSPMUC has to meter production for a more accurate determination of its losses. It also has to collect all its bills from customers. Staff productivity and efficiency can be improved by investing in training of more staff. More samples should be tested for residual chlorine to check on the effectiveness of its disinfection measures.

Fikkal Drinking Water and Sanitation Users Association

Fikkal Drinking Water and Sanitation Users Association provides water at only 49 lpcd to its consumers for an average of 24 hours per day throughout the year to 50% of the population in its service area. NRW of 37.3% is sixth highest with consumption fully metered but not for production rendering the NRW value unreliable. Financial management is good with operating ratio of 0.58, accounts receivable equivalent of 0.8 month and collection efficiency of 105.5% suggesting efforts at collecting past arrears. Average tariff of NRs30.66/m³ is third highest which is more than enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 8.9 is at the bottom quartile among the highest. With a low operating ratio, FDWSUA may be able to develop new sources to increase water supply to customers and expand coverage without increasing tariff. It should meter its production to have a better determination of its losses to be able to appropriately address high NRW. FDWSUA should send its staff to training courses to develop their capacity and increase their productivity. Monitoring of residual chlorine should be according to the national drinking water standards.

Gaindakot Water Supply Users and Sanitation Organization

Gaindakot Water Supply Users and Sanitation Organization provides water at 159 lpcd to its consumers for an average of 24 hours per day throughout the year to 80% of the population in its service area. NRW of 15% is better than average with consumption fully metered but not for production rendering the NRW value unreliable. Financial management is good with operating ratio of 0.72, no accounts receivable and collection efficiency of 100%. Average tariff of NRs5.05/m³ is second lowest but is more than enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 2.3 is the lowest. Customer satisfaction is good

although the service provider may need to expand coverage with development of additional source. GWSUSO can still afford to increase tariff to fund the additional source with its very low tariff. The low tariff may also be a factor for the high per capita consumption which is the second highest. The service provider should also meter its production to have a better determination of its losses to properly address them. GWSUSO should send its staff to training courses to develop their capacity and increase their productivity.

Nepal Water Supply Corporation, Gaur

NWSC Gaur provides water at only 57 lpcd to its consumers for an average of 7 hours per day throughout the year to 73.5% of the population in its service area. NRW of 25.5% is higher than average with production fully metered and consumption 90.4% metered. Financial management needs improvement with operating ratio at 2.60, accounts receivable equivalent of 2.9 months and collection efficiency of 75.7%, the second lowest. Average tariff of NRs9.75/m³ is in the bottom quartile and inadequate to cover operating expenses. Staff/1000 connections ratio at 15.5 is third highest. NWSC Gaur need to provide more water to its customers, expand coverage to more people in its service area and extend water availability to more than 7 hours per day. It may have to develop new sources with corresponding tariff increase and reducing its water losses. Tariff increase is also needed for revenues to cover O&M costs with measures to collect all bills also in a timely manner. NWSC Gaur should send more staff to training courses to develop their capacity and increase their productivity.

Gauradaha Water and Sanitation Users Committee

Gauradaha Water and Sanitation Users Committee provides water at 55 lpcd to its consumers for an average of 24 hours per day during both dry and wet months to only 45.1% of the population in its service area. NRW of 45% is third highest with both production consumption 100% metered. Operating ratio is 1.42 with revenues not enough to cover O&M expenses mainly because of the high NRW. Accounts receivable equivalent is 0.4 month with collection efficiency of 100.4%. Average tariff of NRs16.01/m³ is just above average but not enough to produce the necessary revenues to cover operating costs. Staff/1000 connections ratio at 4.8 is better than the average. There is a need to reduce NRW which will allow the service provider to provide more water to consumers and expand its service to more households and also to improve its finances together with the development of new sources. GWSUC can also invest in training its staff to increase their productivity and efficiency.

Ghorahi Drinking Water Users and Sanitation Association

Ghorahi Drinking Water Users and Sanitation Association provides water at only 58 lpcd to its consumers for an average of 2 hours per day in the dry months and 3 hours per day in the wet months to 75.4% of the population in its service area. NRW of 22.4% is just higher than average with consumption 95% metered but none for production rendering the NRW value unreliable. Financial management is good with operating ratio of 0.77 and accounts receivable equivalent of 0.4 month although collection efficiency at 96.2% needs some improvement. Average tariff of NRs24.82/m³ is in the top quartile and is more than enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 5.1 is good, lower than the average. GDWUSA may have to develop new sources to increase water supply to customers and expand coverage. It can extend water availability with the use of power generators. It should also meter its production to have a better determination of its losses to appropriately address them. GDWUSA should send its staff to training courses to develop their capacity and increase their productivity. It needs to monitor residual chlorine properly according to national drinking water standards to check on the effectiveness of its disinfection treatment.

Haraicha Water Supply and Sanitation Users Committee

Haraicha Water Supply and Sanitation Users Committee provides water at only 44 lpcd to its consumers for an average of 20 - 18 hours per day during the dry and wet months, respectively, to only 42.8% of the population in its service area. NRW of 36.9% is seventh highest with production not metered and consumption 100% metered making NRW an estimate at best. Financial management still needs improvement with an operating ratio of 1.20 and collection efficiency of 98.1% despite having accounts receivable equivalent of only 0.2 month. The service provider has lower than average tariff of NRs11.73/m³ and does not produce enough revenues to cover O&M expenses. Staff/1000 connections ratio at 5.6 is at the median and lower than the average. There is a need to increase tariff to allow the utility to cover its operating costs and raise capital to expand its services to more households and provide more supply to consumers. The service provider should meter its production to better determine the extent of its losses to address them properly. HWSSUC has to monitor residual chlorine better according to the national drinking water standards to check effectiveness of its chlorination measures.

Hetauda Water Supply Management Board

Hetauda Water Supply Management Board provides water at 83 lpcd to its consumers for an average of 3.5 hours per day during the dry months and 4.5 hours per

day in the wet months and to 83.3% of the population in its service area. NRW of 28% is near the bottom quartile. Production is not metered and consumption is only 95% metered making the NRW an estimate at best. Accounts receivable equivalent of 2.4 months needs some improvement while operating ratio of 0.88 and collection efficiency of 118.1% are good with the latter showing efforts at collecting past arrears. Average tariff of NRs11.65/m³ is lower than the average but enough to cover O&M expenses. Staff/1000 connections ratio at 4.0 is in the top quartile. More efforts must be taken to collect bills in a timely manner. There is a need to increase water availability to more than 3-4 hours per day with backup generators as other service providers have done. HWSMB also needs to fully meter production and all its connections to have a more accurate determination of NRW to reduce it as appropriate. It needs to send staff to training courses to improve their skills and productivity.

Itahari Small Town Water Supply and Sanitation Users Association

Itahari Small Town Water Supply and Sanitation Users Association provides water at 76 lpcd to its consumers for an average of 10 - 14 hours per day during the dry and wet months, respectively, to 66.7% of the population in its service area. NRW of 13% is outside the top quartile with both production and consumption fully metered. Financial management is good with an operating ratio of 0.95, accounts receivable equivalent of 0.2 month and 104.7% collection efficiency suggesting efforts in collecting past arrears. Average tariff of NRs10.09/m³ is in the bottom quartile but enough to bring revenues to cover O&M expenses. Staff/1000 connections ratio is good at 3.3, the fifth lowest among the service providers. Additional investments may be needed to develop new sources and provide backup power to raise water availability to more than just 10 - 14 hours per day and to expand water services to more people. ISTWSSUA can further increase productivity and efficiency of its staff by sending them to appropriate training courses. The service provider should monitor residual chlorine according to the national drinking water quality standard.

Nepal Water Supply Corporation, Jaleshwor

NWSC Jaleshwor provides water at only 48 lpcd to its consumers for an average of 8.3 hours per day throughout the year to 29.8% of the population in its service area, the sixth lowest coverage. NRW of 30.1% is almost within the bottom quartile with production fully metered and consumption only 75.6% metered. Financial management needs improvement with operating ratio of 2.71 and the fifth highest accounts receivable equivalent of 5.5 months although collection efficiency of 109.2% suggests efforts at collecting arrears. Average tariff of NRs10.45/m³ is at the lowest bottom quartile and not enough to cover operating expenses. Staff/1000 connections ratio at 21.4 is the second highest. NWSC

Jaleshwar needs additional sources to provide more water to its customers and to expand coverage. The service provider needs to extend water availability to more than 8.3 hours per day. It has to increase tariff to adequately cover its O&M expenses and to collect bills on time. NWSC Jaleshwar should send more staff to training courses to develop their capacity and increase productivity. Monitoring of residual chlorine is necessary to check on the effectiveness of its chlorination measures.

Kakarvitta Water Users and Sanitation Association

Kakarvitta Water Users and Sanitation Association provides water at 59 lpcd to its consumers for an average of 21 - 24 hours per day during the dry and wet months, respectively, and to 72.5% of the population in its service area. NRW of 11% is in the top quartile among the lowest. Both production and consumption are fully metered. Financial management is good with operating ratio of 0.70, accounts receivable equivalent of 1.1 months and 100% collection efficiency. Average tariff of NRs22.33/m³ is ninth highest, enough to raise revenues to cover O&M expenses. Staff/1000 connections ratio at 6.3 is better than the average. The service provider should expand its services to more people in its service area with more water to its customers. KWUSA should continue developing the capacity of its staff by sending them to appropriate training programs. It should monitor residual chlorine to check on the effectiveness of its chlorination measures following the national drinking water quality standards.

Karmaiya Drinking Water and Sanitation Users Committee

Karmaiya Drinking Water and Sanitation Users Committee provides water at only 39 lpcd to its consumers for an average of 6 hours per day during the dry months and 7 hours per day in the wet months and to 86.7% of the population in its service area. NRW of 35% is the eighth highest. However, production is not metered although consumption is 99.8% metered making the NRW value an estimate at best. Financial management needs improvement with an operating ratio of 1.19 and accounts receivable equivalent of 4 months, also fourth highest, although collection efficiency of 110.8% suggests efforts to collect arrears. Average tariff of NRs13.44/m³ is lower than the average and not enough to cover O&M expenses. Staff/1000 connections ratio at 4.6 is near the top quartile. KWSUC should increase tariffs to cover its operating expenses and collect them in time. Production needs to be metered to have a more accurate determination of NRW and to reduce it. It has to invest in the development of new sources to be able to provide more water to consumers and for longer periods per day. KDWSUC should train its staff to develop their capacity and monitor residual chlorine to check on the effectiveness of disinfection measures.

Kawasoti Water Supply and Sanitation Users Association

Kawasoti Water Supply and Sanitation Users Association provides water at only 56 lpcd to its consumers for an average of 8 hours per day in the dry months and 10 hours per day in the wet months to 90.6% of the population in its service area. NRW of 23.5% is higher than the average with consumption 99.8% metered but none for production rendering the NRW value unreliable. Operating ratio at 1.10 and accounts receivable equivalent at 1.1 months both need some improvement although collection efficiency at 101.6% is good. Average tariff of NRs15.08/m³ is just about average but is not enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 4.1 is among the lowest in the top quartile. KWSSUA will have to develop new sources to increase water supply to customers. It needs to extend water availability to more than 8-10 hours per day. It should also meter its production to have a better determination of its losses. KWSSUA should send its staff to training courses to develop their capacity and increase their productivity. It may have to increase its sampling for residual chlorine based on the national drinking water quality standards.

Khairanitar Small Town Water Supply and Sanitation Users Association

Khairanitar Small Town Water Supply and Sanitation Users Association provides water at 72 lpcd to its consumers for an average of 3 hours per day during the dry season and 6 hours per day in the wet season to 93.5% of the population in its service area. NRW of 14% is just outside the top quartile with consumption and production both fully metered. Financial management is good with operating ratio of 0.48, accounts receivable equivalent of 0.1 month and collection efficiency of 97.9%. Average tariff of NRs16.96/m³ is just next to the top quartile covering operating expenses well. Staff/1000 connections ratio at 4.7 is good. There is a need to increase water availability to more than 8 hours per day by investing on a backup power supply. Additional overhead storage should also be considered for the longer term. Additional sources may be needed to provide more water to customers and serve those not yet connected to the utility. KSTWSUA needs to monitor residual chlorine according to the national drinking water quality standards. It should continue training its staff for greater productivity.

Khajura Drinking Water Consumer and Sanitation Committee

Khajura Drinking Water Consumer and Sanitation Committee provides water at 112 lpcd to its consumers for an average of 8 hours per day throughout the year to only 31.1% of the population in its service area. NRW of 26.7% is near the bottom quartile with high NRW with consumption fully metered but not for production rendering the NRW value unreliable. Operating ratio is

still acceptable at 0.96 together with collection efficiency at 99% although accounts receivable equivalent of 1.9 months needs improvement. Average tariff of NRs12.05/m³ is barely enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 10.2 is among the highest in the bottom quartile. While KDWCS provides adequate water to its customers it may have to develop new sources to expand coverage and to extend availability to more than 8 hours per day. The service provider should collect bills on time. It should also meter its production to have a better determination of its losses and subsequently reduce them. KDWCS should send its staff to training courses to develop their capacity. It should also monitor residual chlorine according to the national drinking water standards.

Nepal Water Supply Corporation, Krishnanagar

NWSC Krishnanagar provides water at 62 lpcd to its consumers for an average of only 3 hours per day throughout the year to 60% of the population in its service area. NRW of 26% is higher than the average with production not metered and consumption 93% metered. Financial management needs improvement with operating ratio of 2.01, accounts receivable equivalent of 1.7 months and collection efficiency of only 80.6%, the third lowest. Average tariff of NRs7.86/m³ is seventh lowest and not enough to cover O&M expenses. Staff/1000 connections ratio at 15.5 is third highest. The service provider will have to do more for its consumers starting with adding new sources to provide more water, expand coverage and extend water availability to much more than just 3 hours per day. Tariffs will have to be increased to cover O&M expenses and all bills need to be collected on time. NWSC Krishnanagar should send more staff to training courses to develop their capacity. Residual chlorine should be monitored according to the national drinking water quality standards. Production need to be metered as well.

Lakhanpur Water Supply and Sanitation Users Committee

Lakhanpur Water Supply and Sanitation Users Committee provides water at 67 lpcd to its consumers for an average of 24 hours per day in both the dry months and wet months to 33.2% of the population in its service area. NRW of 20% is higher than the average with production and consumption both 100% metered. Financial management is good with operating ratio of 0.83, collection efficiency of 100% and no accounts receivable. Average tariff of NRs11.48/m³ is lower than the average but is enough to cover O&M expenses. Staff/1000 connections ratio at 2.8 is the third lowest showing good utilization of staff. There is a need to increase coverage to more people in its service area as well as the amount of water delivered to its customers. This will require the development of additional sources which could result in increase in tariff. LWSUC will have

to monitor residual chlorine according to the national drinking water quality standards to check on the effectiveness of chlorination measures. With only three people, the service provider should continue developing the skills and capacity of its staff.

Lamahi Water Supply and Sanitation Users Committee

Lamahi Water Supply and Sanitation Users Committee provides water at 95 lpcd to its consumers for an average of 8 hours per day in the dry months and 12 hours per day in the wet months to 49.8% of the population in its service area. NRW of 30% is high with consumption fully metered but not for production rendering the NRW value unreliable. Operating ratio at 0.71 and accounts receivable equivalent at 0.1 month are both good although collection efficiency at 98.5% could still be improved. Average tariff of NRs14.29/m³ is at the median but is more than enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 9.6 is in the bottom quartile among the highest. Although per capita supply is almost adequate, LWSSUC has to develop new sources to extend coverage to half of the population in its service area. It should meter its production to have a better determination of its losses to be able to reduce its NRW. LWSSUC should continue sending its staff to training courses to develop their capacity and increase their productivity. The service provider should monitor residual chlorine according to the national drinking water quality standards.

Lekhnath Small Town Water Supply and Sanitation User Committee

Lekhnath Small Town Water Supply and Sanitation User Committee provides water at 68 lpcd to its consumers for an average of 14 hours per day throughout the year to 76.5% of the population in its service area. NRW of 31% is at the bottom quartile among the highest with both production and consumption fully metered. Financial management is good with operating ratio at 0.46 and accounts receivable equivalent of 0.7 month with collection efficiency of 97.4% that could still be improved. Average tariff of NRs17.74/m³ is in the top quartile and more than enough to cover O&M expenses. Staff/1000 connections ratio is also good at 3.6 which is the seventh lowest. While financial management is good, consumers need to be provided with more water for longer hours per day. Availability also needs to be extended to more than 14 hours per day. LSTWSSUC may need to develop new sources and invest in a backup power generator to achieve these. In addition additional overhead storage will need to be considered to cater for the growing demands in this extensive scheme. NRW needs to be reduced as it helps in providing more water per capita and in extending services to more consumers. The service provider should continue to train its staff as well as monitor residual chlorine to make chlorination more effective.

Nepal Water Supply Corporation, Mahendranagar

NWSC Mahendranagar provides water at 111 lpcd to its consumers for an average of 8.5 hours per day in the dry months and 7.5 hours per day in the wet months to 32.2% of the population in its service area. NRW of 15.5% is better than average with production fully metered and consumption only 83.3% metered. Financial management is mixed with operating ratio at 1.64 needing improvement while accounts receivable equivalent of 0.5 month and collection efficiency of 100.3% are both good. Average tariff of NRs9.03/m³ is in the bottom quartile among the lowest and is not enough to cover operating expenses. Staff/1000 connections ratio at 9.1 is in the bottom quartile. While providing adequate supply to consumers, the service provider will have to extend water availability to more than just 8.5 hours per day and extend services to 2/3 of the population in the service area. The service provider may have to develop new sources and install power generators in the system. Tariff will have to be increased to cover these investments and to cover O&M expenses. NWSC Mahendranagar should send its staff to training courses to develop their capacity and increase their productivity.

Mahendranagar Water Users and Sanitation Association

Mahendranagar Water Users and Sanitation Association provides water at 70 lpcd to its consumers for an average of 10 hours per day during the dry months and 8 hours per day in the wet months to 66.7% of the population in its service area. NRW of 21% is just about average with production fully metered but consumption only 59.4% metered rendering the NRW value unreliable. Operating ratio is acceptable at 0.98, but accounts receivable equivalent at 1.9 months and collection efficiency at 84.4%, the fourth lowest, both need improvement. Average tariff of NRs10.81/m³ is barely enough to cover O&M costs. Staff/1000 connections ratio at 5.4 is good and lower than the average. MWUSA may have to develop new sources to increase water supply to customers and expand coverage. It should consider installing power generators to extend water availability to more than just 10 hours per day. It should also meter all its connections to have a better determination of its losses to be able to reduce NRW properly. MWUSA should send its staff to training courses to develop their capacity and increase their productivity. Residual chlorine should be monitored according to the national drinking water quality standards to check on the effectiveness of its disinfection measures.

Birat/Mangadh Water Supply and Sanitation Users Committee

Birat/Mangadh Water Supply and Sanitation Users Committee provides water at only 56 lpcd to its consumers for an average of 10 hours per day during both dry and wet months to 43.9% of the population in its

service area. NRW of 12% is in the top quartile, among the lowest, with both production and consumption fully metered. Financial management is good with operating ratio at 0.84, accounts receivable equivalent of 0.4 month although collection efficiency of 96.5% needs some improvement. Average tariff of NRs16.17/m³ is a little above average and enough to cover O&M costs. Staff/1000 connections ratio at 3.7 is good at ninth lowest. B/MWSSUC needs to develop new sources to provide more water to its consumers and expand services to more than half of its service area population. It should extend availability to more than 10 hours per day with the installation of power generators. The service provider should continue training of its staff to develop their skills.

Nayagaun Water Supply Users and Sanitation Association

Nayagaun Water Supply Users and Sanitation Association provides water at 131 lpcd, the third highest, to its consumers for an average of 24 hours per day to 80.4% of the population in its service area. NRW of 10% is tenth lowest in the top quartile. Production is fully metered with consumption at 98.5% metering. Financial management is good with operating ratio of 0.97 and accounts receivable equivalent of 0.4 month although collection efficiency of 96.4% needs some improvement. Average tariff of NRs6.67/m³ is sixth lowest which is barely enough to cover operating costs. Staff/1000 connections ratio at 3.6 is good at seventh lowest. While customer service is good with more than sufficient per capita supply and 24 hours per day availability, NWSUSA can still extend services to about 1/5 of the population in its service area with new sources. This may require an increase in tariff which may help reduce the high per capita consumption. The service provider should collect all its bills. It should consider sending its staff to more training programs to increase their productivity. It may have to increase the number of samples for residual chlorine according to the national drinking water quality standards.

Parsa Small Town Water Supply and Sanitation Consumers' Association

Parsa Small Town Water Supply and Sanitation Consumers' Association provides water at 70 lpcd to 64.8% of the population in its service area for an average of 24 hours per day both in dry and wet months. NRW of 14.4% is near the top quartile with production not metered and consumption fully metered making the NRW value unreliable. Operating ratio is good at 0.48, but accounts receivable equivalent of 2.6 months needs improvement with the highest collection efficiency of 130.1% suggesting efforts in collecting large past arrears. Average tariff of NRs20.57/m³ is the top quartile allowing the utility to cover its O&M expenses with more than sufficient revenues. Staff/1000 connections ratio is good at 4.7, lower than the median and the average. There is still a need to increase the amount of water available to

consumers and expanding coverage. PSTWSSCA needs to collect all its bills in a timely manner. It should continue providing training for its staff to develop their skills and capacity.

Pathari Water Users and Sanitation Committee

Pathari Water Users and Sanitation Committee provides water at only 48 lpcd to its consumers for an average of 6 hours per day throughout the year to only 21.3% of the population in its service area. Production is not metered although consumption is 100% metered rendering the fifth highest 37.7% NRW figure as unreliable. Financial management needs to be improved with operating ratio of 1.67 and collection efficiency of 95.3% although accounts receivable equivalent is good at 0.6 month. Average tariff of NRs14.18/m³ is below the average and not enough to cover O&M expenses. Staff/1000 connections ratio at 4.3 is good and in the top quartile. Customer service needs to be improved by increasing the amount of water delivered to the homes, expanding the coverage and making water available to more than 6 hours per day. Production will have to be increased with a new source to achieve this. Tariff may have to be increased to raise enough revenues to cover operating expenses and the cost of developing a new source. Production needs to be metered for better determination of water losses to be able to take measures to reduce NRW which can complement the new sources. Residual chlorine should be monitored using the national drinking water quality standards. PWUSC should send staff to training courses to develop their skills and increase their productivity.

Pragatinagar Water Supply and Sanitation Users Committee

Pragatinagar Water Supply and Sanitation Users Committee provides water at 84 lpcd to its consumers for an average of 16 hours per day throughout the year to 96.5% of the population in its service area. NRW of 33.3% is among those in the bottom quartile with consumption 97.6% metered but none for production rendering the NRW value unreliable. Operating ratio at 1.06 and accounts receivable of 1.2 months both need some improvement although collection efficiency at 100% is good. Average tariff of NRs11.82/m³ is lower than average and is a bit short of raising revenues to cover O&M costs. Staff/1000 connections ratio at 4.2 is good among those in the top quartile. PWSSUC could extend availability to more than 16 hours per day by installing power generators. It could raise tariff or reduce O&M costs to improve its operating ratio. The service provider should collect its bill payments in time. Production has to be metered to determine its real losses to be able to reduce them. PWSSUC should send its staff to training courses to develop their capacity and increase their productivity.

Prithvinarayan Small Town Drinking Water & Sanitation Users' Committee

Prithvinarayan Small Town Drinking Water & Sanitation Users' Committee provides water at only 56 lpcd to its consumers for an average of 5 hours per day in the dry months and 8 hours per day during the wet months to 84.9% of the population in its service area. NRW of 32.4% is among the highest in the bottom quartile with production not metered although consumption is 100% metered making the NRW an estimate at best. Financial management needs to be improved with operating ratio at 1.11, accounts receivable equivalent of 1.2 months and collection efficiency of 99.0%. Average tariff of NRs47.47/m³ is the highest yet it is not enough to raise revenues to cover operating expenses. Staff/1000 connections ratio at 10.7 is the eighth highest. There is a need to reduce NRW but production has to be metered first to determine the actual value better. More water can be provided to consumers and more people can be served with the development of additional sources complemented by NRW reduction. The service provider needs to increase tariffs to cover its O&M costs and to collect bill payments in time. It should send more staff to training courses to develop their skills and capability. PNSTDWSUC should monitor residual chlorine according to national drinking water quality standards.

Ratnanagar Water Supply and Sanitation Users Association

Ratnanagar Water Supply and Sanitation Users Association provides water at 94 lpcd to its consumers for an average of 10 hours per day throughout the year to 50% of the population in its service area. NRW of 12% is at the top quartile with production not metered although consumption is 99.4% metered making the NRW value an estimate at best. Financial management is good with operating ratio of 0.49 and accounts receivable equivalent of 0.8 month although collection efficiency is 94.7% needing some improvement. Average tariff of NRs16.84/m³ is near the top quartile and is more than enough to cover O&M costs. Staff/1000 connections ratio at 2.4 is the second lowest among the utilities. While it is providing sufficient water per capita coverage must be increased as one of the service provider's priorities. It should also extend availability to more than 10 hours per day. More efforts should be made in collecting all bill payments. RWSUA needs to fully meter all its consumers and production to have a more accurate determination of water losses. It should also provide training for more staff to develop their skills and capability.

Salakpur Water Supply and Sanitation Users Committee

Salakpur Water Supply and Sanitation Users Committee provides water at only 43 lpcd to its consumers for an average of 13.5 hours per day throughout the year to 52%

of the population in its service area. NRW of 9% is good at seventh lowest with both production and consumption fully metered. Financial management is good with no accounts receivable and collection efficiency of 100% although operating ratio at 1.11 needs improvement. Average tariff of NRs15.23/m³ is about average but is not enough to cover operating expenses. Staff/1000 connections ratio at 5.0 is good enough and better than average. Consumers need to have more water per capita and longer water availability. The service provider may have to develop new sources for this and also install power generators to extend services to more than 13.5 hours per day. There is room for tariff increase to cover O&M costs. SWSSUC should send more staff to training courses to develop their capacity and increase their productivity. It should monitor residual chlorine according to the national drinking water quality standards to check on the effectiveness of chlorination treatment.

Shanischare-Arjundhara Water Supply and Sanitation Users Committee

Shanischare-Arjundhara Water Supply and Sanitation Users Committee provides water at 63 lpcd to its consumers for an average of 24 hours per day throughout the year to 60% of the population in its service area. NRW of 32% is in the bottom quartile with production and consumption fully metered. Financial management is fine with operating ratio of 0.96 but needs improvement in its accounts receivable equivalent of 1.3 months and 88.8% collection efficiency. Average tariff of NRs14.80/m³ is just above the median and barely enough for revenues to cover O&M expenses. Staff/1000 connections ratio at 5.9 is lower than the average but higher than the median. Priority should be the reduction of NRW as this can augment additional supply to increase coverage and expand services. This will require increase in tariff to cover capital costs and improve operating ratio. SAWSSUC needs to collect all bill payments on time. It needs to provide training for its staff to develop their capacity and increase productivity. Residual chlorine should also be monitored according to the national drinking water quality standards to check on the effectiveness of chlorination treatment.

Shankarnagar Water Users and Sanitation Association

Shankarnagar Water Users and Sanitation Association provides water at 101 lpcd to its consumers for an average of 24 hours per day throughout the year to 79.1% of the population in its service area. NRW of 20.0% is lower than the median among the utilities with both production and consumption fully metered. Financial management is good with operating ratio at 0.60, accounts receivable equivalent of 0.1 month and collection efficiency of 99.4%. Average tariff of NRs10.84/m³ is just above the bottom quartile but more than enough to cover operating expenses. Staff/1000 connections ratio is good at 3.5, the fifth lowest. The

service provider is doing well needing only some improvements in serving more customers which may require developing new sources as current production may not be sufficient to increased demand. SWUSA should send staff to training courses to further develop their capacity and increase productivity. Residual chlorine needs to be monitored according to the national drinking water quality standards to check on the effectiveness of chlorination treatment.

Shivalaya Water Supply User and Sanitation Organization

Shivalaya Water Supply User and Sanitation Organization provides water at 93 lpcd to its consumers for an average of 8 hours per day during the dry months and 9 hours per day in the wet months to 97.2% of the population in its service area. NRW of 34.7% is the eighth highest with consumption fully metered but only 42% of production is metered making the NRW value an estimate at best. Financial management is good with operating ratio at 0.61, accounts receivable of 1.0 month and collection efficiency of 103.6% suggesting some efforts at collecting past arrears. Average tariff of NRs17.23/m³ is in the top quartile and is sufficient enough to raise revenues that covers O&M expenses well. Staff/1000 connections ratio at 8.4 is higher than the average. NRW needs to be lowered but production needs to be fully metered first to determine the real NRW value. SWUSO is serving its consumers well except for water availability which can be improved with the use of power generators. It should continue sending more staff to training courses to develop their capacity and increase their productivity. More residual chlorine tests may be needed to conform to the national drinking water quality standards.

Siddeshwor Water Supply Users and Sanitation Committee

Siddeshwor Water Supply Users and Sanitation Committee provides water at only 30 lpcd, the third lowest, to its consumers for an average of 1 hour per day throughout the year to 68.8% of the population in its service area. NRW of 20% is lower than the average with consumption only 77.7% metered and none for production rendering the NRW value unreliable. Operating ratio is good at 0.50 but accounts receivable equivalent at 2.3 months and collection efficiency of only 85.9% both need improvement. Average tariff of NRs15.07/m³ is more than enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 6.9 is a little lower than the average. SWSUSC has to do more for its consumers starting with more supply per capita, much longer availability in hours per day and serving more people in its service area. This will require increasing tariff to cover the costs involved. It should also meter its production and all connections to have a better determination of its losses. The service provider should collect all its bills in a timely manner. SWSUSC should send its staff to training courses to develop their capacity and increase their productivity.

Monitoring of residual chlorine should be according to the national drinking water quality standards.

Simara Water Users and Sanitation Committee

Simara Water Users and Sanitation Committee provides water at 125 lpcd to its consumers for an average of 5 hours per day in the dry months and 7 hours per day in the wet months to only half of the population in its service area. NRW of 19.4% is lower than the average with consumption 97.8% metered but none for production rendering the NRW value unreliable. Operating ratio is acceptable at 0.95, accounts receivable need improvement at 1.9 months while collection efficiency at 125.8% indicates collection of past arrears. Average tariff of NRs8.95/m³ is eighth lowest and is barely enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 6.5 is better than the average. While providing more than enough supply per capita, SWUSC can only serve half of its mandated population and only for 5-7 hours per day which it needs to address with additional sources and more reliable power generators. It should also meter its production and all connections to have a better determination of its losses. SWUSC should send more staff to training courses to develop their capacity and increase their productivity. It should monitor residual chlorine content to check on the effectiveness of chlorination treatment according to the national drinking water quality standards.

Sunwal Water Supply and Sanitation Committee

Sunwal Water Supply and Sanitation Committee provides water at only 27 lpcd, the lowest, to its consumers for an average of 12 hours per day in the dry months and 10 hours per day in the wet months to 63% of the population in its service area. NRW of 48% is second lowest with consumption 100% metered and production not metered at all making the NRW value an estimate at best. Financial management is acceptable with operating ratio of 0.69, collection efficiency of 95% and accounts receivable equivalent of 1.0 month. Average tariff of NRs28.82/m³ is fourth highest which is enough to raise revenues to cover O&M expenses. Staff/1000 connections ratio at 6.7 is better than average. SWSSC should provide more water for longer hours and expand its coverage which will require new water sources with corresponding tariff adjustment. NRW should be reduced starting with full metering of production to determine the real extent of losses. It should collect all its bill payments. SWSSC has a difficult task of developing new sources and increasing tariff as its tariff is already among the highest. The service provider should provide more training to its staff and properly monitor residual chlorine according to the national drinking water quality standards.

Surunga Water Supply and Sanitation Users Association

Surunga Water Supply and Sanitation Users Association provides water at 65 lpcd to its consumers for an average of 24 hours per day throughout the year to 57.8% of the population in its service area. NRW of 9% is good at seventh lowest with consumption fully metered but not for production rendering the NRW value unreliable. Operating ratio is the lowest at 0.44, accounts receivable good at 0.7 month although collection efficiency at 94% needs some improvement. Average tariff of NRs27.68/m³ is fifth highest which is more than enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 4.4 is good at just outside the top quartile. With a low operating ratio, SWSSUA may be able to develop new sources to increase water supply to customers and expand coverage without increasing tariff. It should meter its production to have a better determination of its losses. SWSSUA should send its staff to training courses to develop their capacity and increase their productivity.

Tankisinwari Water Supply Users and Sanitation Committee

Tankisinwari Water Supply Users and Sanitation Committee provides water at 74 lpcd to its consumers for an average of 11 hours per day throughout the year to 26.2% of the population in its service area, the third lowest coverage. NRW of 13% is almost in the top quartile. Production is fully metered while consumption is 98.5% metered. Financial management needs improvement with operating ratio of 1.26, accounts receivable equivalent of 1.8 months and collection efficiency of 85.2%. Average tariff of NRs13.50/m³ is below average but not enough to cover O&M costs. Staff/1000 connections ratio at 6.7 is lower than average. TWUSC rates low in customer satisfaction and may need to develop new sources to provide more water to its customers, increase coverage and have longer water availability with the use of power generators. This may require increasing tariff to cover development costs and O&M expenses adequately. The service provider will also have to collect all its billings and in a timely basis. It has to train more staff to develop their skills and monitor residual chlorine according to the national drinking water quality standards.

Nepal Water Supply Corporation, Taulihawa

NWSC Taulihawa provides water at 73 lpcd to its consumers for an average of 5 hours per day throughout the year to only 28% of the population in its service area. NRW of 22.2% is just above the average with production not metered and consumption 99.1% metered making the NRW value questionable. Financial management is mixed with operating ratio at 3.14, accounts receivable equivalent of 0.5 month and collection efficiency of 110.5% suggesting collection of past arrears. Average tariff of NRs5.95/m³ is third lowest and not enough to cover operating expenses. Staff/1000 connections ratio at

11.1 is fifth highest. The service provider may have to develop new sources to serve about ¾ of the population in its service area and install reliable power generators to extend availability to much more than 5 hours per day. The very low tariff will have to be increased to cover capital and O&M costs. Production should be metered to determine the real NRW level. NWSC Taulihawa should send more staff to training courses to develop their capacity and increase their productivity. It should monitor residual chlorine according to the national drinking water quality standards to check on the effectiveness of its chlorination treatment.

Tulsipur Water Supply and Sanitation Users Association

Tulsipur Water Supply and Sanitation Users Association provides water at only 33 lpcd to its consumers for an average of 4 hours per day throughout the year to 77.8% of the population in its service area. NRW of 32.9% is in the bottom quartile with the highest NRW with production and consumption fully metered. Financial management is good with operating ratio of 0.72 and accounts receivable of 0.8 month although collection efficiency at 93.4% needs improvement. Average tariff of NRs21.42/m³ is in the top quartile among the highest which is more than enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 7.2 is the average. TWSSUA will have to develop new sources to increase water supply to customers and expand coverage. It will also have to extend availability to more than just 4 hours per day. The service provider should take effort to collect all its bills. Reducing NRW will help it augment its water supply. TWSSUA should send its staff to training courses to develop their capacity and increase their productivity. It should monitor residual chlorine according to the national drinking water quality standards.

Urlabari Water Supply Users and Sanitation Association

Urlabari Water Supply Users and Sanitation Association provides water at 62 lpcd to its consumers for an average of 24 hours per day throughout the year to only 48.9% of the population in its service area. NRW of 8% is the sixth lowest with production 100% metered and consumption fully metered. Financial management is good with operating ratio at 0.84, accounts receivable equivalent of 0.3 month with collection efficiency of 97.1% needing some improvement. Average tariff of NRs15.95/m³ is just about the average and enough for revenues to cover operating costs. Staff/1000 connections ratio at 5.8 is just about the median. UWSUSA may need to develop additional sources to increase coverage and provide more water to its customers but it may also have to increase tariff to be able to finance the cost of developing new water sources. It has to collect all its bills. The service provider should send more staff to training courses to develop their capacity and increase productivity. The number of residual chlorine tests will have to be increased according to the national drinking water quality standards.

COMMENT AND ANALYSIS BY PERFORMANCE INDICATOR

Water supply coverage (Average – 63.4%)

None of the service providers cover all the households in their command area has 100% population coverage. Those with the highest coverage are Dhulikel (97.4%), Shivalaya (97.2%), Pragatinagar (96.5%) and Bhimad (94.8%). Four others have more than 90% coverage. About 1/3 of the service providers are serving less than 50% of the population in their respective areas of responsibility. The lowest coverage is in Belbari (20.0%), followed by Pathari (21.3%), Tankinsiwari (26.2%), Taulihawa (28.0%) and Duhabi (28.2%). Coverage of Belbari and Pathari are affected by high NRW. Pathari has supply constraint.

Water availability (Dry Months) (Average – 10.7 hours/day)

Twelve water service providers have 24 hours water supply during the dry months led by those who also provide 24 hours supply in the wet months, namely Aanbukhareni, Damak, Fikkal, Gaindakot, Gauradaha, Lakhanpur, Nayagaun, Parsa, Shanischare, Shankaranagar, Surunga and Urlabari. Ten others have 12 hours or more water supply per day. About 2/3 of the service providers have less than 12 hours supply per day during the dry months.

Supply duration of less than 24 hours pose not only a risk to health but they also affect metering and the ability to reduce NRW levels. The shortest supply duration per day belong to Bhimad, Chainpur and Siddeshwor (1.0 hour) followed by Bijuwar and Banepa (1.5 hours), and Baglung, Beljhundi, Dolakha and Ghorahi (2 hours).

Water availability (Wet Months) (Average – 12.3 hours/day)

Water availability during the wet months is a little bit better overall with 16 service providers having 24 hour water supply. This includes the twelve above with 24 hours supply in dry months plus Beni, Besishahar, Dhulabari, and Kakarvitta. Eleven others have 12 hours or more water supply per day. About 57% of the service providers have less than 12 hours daily water supply in the wet months mostly because of their inability to provide backup power generators for pumping for both production and distribution. The shortest supply duration in the wet months belongs to Siddeshwor (1.0 hour) followed by Banepa (1.5 hours), and Bhimad, Beljhundi, Bijuwar and Chainpur (2.0 hours).

Consumption (Average – 70.4 lpcd)

The high consumption VDCs or towns are Duhabi (181 lpcd), Gaindakot (159 lpcd), Nayagaun (131 lpcd), Simara (125 lpcd), Dolakha (120 lpcd), Khajura (112 lpcd), NWSC Mahendranagar (111 lpcd), Bharatpur (110 lpcd) and Shankarnagar (101 lpcd). Government design standard is 100 lpcd which is reasonable as it is high enough to provide for health and hygiene requirements and low enough to help conserve water resources. The low-consumptions areas are Sunwal (27 lpcd), Baglung (29 lpcd), Siddeshwor (30 lpcd), Tulsipur and Bijuwar (33 lpcd). All these service providers have water resource constraints while Sunwal, Tulsipur and Bijuwar also have high NRW.

Production per person (Average – 0.090 m³/d/person [90lpcd])

This indicator measures overall efficiency of water resource use. The low figures of Baglung (0.035 m³/d/c), Siddeshwor and Chainpur (0.038 m³/d/c), Pathari (0.043 m³/d/c), Beljhundi and Salakpur (0.047 m³/d/c), and Tulsipur (0.049 m³/d/c) reflect shortages of water resources. Those with high production are Duhabi (0.208 m³/d/c), Gaindakot (0.187 m³/d/c), Chandragadhi (0.165 m³/d/c), Simara (0.154 m³/d/c), Khajura (0.153 m³/d/c), Bharatpur (0.150 m³/d/c) and Nayagaun (0.145 m³/d/c). Chandragadhi has a high production to compensate for its high level of NRW.

Non revenue water (Average – 21.6%)

The best performing service providers with low NRW are Bhadrapur (1.4%), Beni (4.4%), Chainpur (5.0%), Dolakha (5.1%), Dhulabari (5.9%) and Urlabari (7.5%). Sixteen other service providers report lower than 15% NRW. The worst performers with high NRW are Belbari (51.0%), Sunwal (47.7%), Gauradaha (44.9%), Chandragadhi (41.9%), Pathari (37.7%), Fikkal (37.3%) and Haraicha (36.9%). Metering is a critical component for determining NRW. Not all of the service providers have fully metered connections and most lack production metering. About 30 service providers have 100% metering of consumption while 22 have fully metered production. About 13 of the service providers claim to have fully metered connections and production.

None of the service providers with low and high NRW have both production and consumption fully metered except for Gauradaha. Hence, NRW figures should be interpreted with caution without full metering. Given low coverage and low water availability in some service provider areas, more must be done to reduce NRW levels. This includes repair of visible leaks, elimination of illegal connections and location and repair of invisible leaks.

Connections metered (Average – 93.4%)

Metering is important to fully account for water production and consumption in reducing NRW. Consumption metering is particularly important for consumers to pay for what they are using which can help in promoting prudent use of water. There is a high level of metering among the service providers. Thirty have all their connections fully metered; 24 have 90% - 99% metering while 7 have 59%-90% metering; Chainpur and Dolakha have no metering at all. Consumption metering must be complemented with full production metering if losses are to be accurately determined to initiate any water loss reduction program.

Operating ratio (Average – 1.02)

A low operating ratio means revenues from tariffs (water consumption billings) cover the operation and maintenance costs comfortably. If we include debt service and depreciation, it will show whether the service provider also has the capacity to expand coverage through tariffs without the grants or subsidies given by government. A ratio above 1.0 means that the service provider does not cover O&M costs. Twenty-two service providers have operating ratios less than 0.75 led by Surunga (0.44), followed by Leknath (0.46), Khairanitar, Parsa and Beni (0.48), Ratnanagar (0.49), Siddeshwor (0.50), Attariya and Fikkal (0.58) and Shankarnagar (0.60). The service providers that are not able to cover their O&M costs from tariffs are Taulihawa (3.14), Jaleshwar (2.71), Gaur (2.60), Bhadrapur (2.03), Krishnanagar (2.01) and Banepa (1.85) with 15 others with operating ratio above 1.00. Twenty service providers have operating ratios between 0.75 and 1.00. These figures above do not include debt service, depreciation and revenues other than those from water consumption and service billings.

Accounts receivable (Average – 1.4 months)

This indicator is a good measure of the effectiveness of a service provider in collecting its receivables or bill payments. In this case, the receivables are expressed in equivalent of the utility's average monthly billing. This indicator is also equated to collection period. For small service providers, accounts receivable representing less than 2 months of its average billing is manageable; for larger service providers, this could be 3 months. But when it has risen to 6 months or more, it has gone out of hand. All of the service providers except for 13 have accounts receivable equivalent of less than 2 months. The best performers for this indicator are three service providers who reported no accounts receivable namely, Lakhanpur, Salakpur and Gaindakot. Twenty-eight others have less than one month; 19 service providers with 1 – 2 months account receivable; and 13 with more than 2 months including Banepa (8.1 months), Bhairahawa (7.0 months), Jaleshwar (5.5 months),

Karmaiya (4.0 months), Beljhundi (3.3 months) and Belbari (3.0 months).

Revenue collection efficiency (Average – 98.6%)

This indicator, together with average tariff, operating ratio, and accounts receivable, have impacts on the financial health of a service provider.

Twenty-one service providers have collection efficiencies of more than 100% ranging from NWSC Mahendranagar (100.3%) to Parsa (130.1%) which may indicate collection of past arrears while 6 others are able to collect bill payments on time. Twenty-six have collection efficiencies of 90%-99%. The service providers that have to improve bill collection are Belbari (75.0%), Gaur (75.7%), Krishnanagar (80.5%), NWSC Mahendranagar (84.4%), Dolakha (84.9%), Tankisinwari (85.2%) and Siddeshwor (85.9%) plus four others. These service providers should increase their collection efforts and encourage consumers to pay their bills on time.

Average tariff (Average – NRs15.40/m³)

The average tariff is one measure of the financial discipline of a service provider and its ability to cover operational costs with revenues from tariffs with prudent expenditures.

The water utilities with high average tariffs are Prithvinarayan (NRs47.47/m³), Dhulikel (NRs37.62/m³), Fikkal (NRs30.66/m³), Sunwal (NRs28.82/m³), Surunga (NRs27.68/m³) and Bijuwar (NRs25.00). Those who charge the lowest tariffs are Dolakha (NRs3.81/m³), Gaindakot (NRs5.05/m³), Taulihawa (NRs5.95/m³), Beljhundi (NRs5.96/m³) and Besishahar (NRs6.54/m³).

With such low tariffs, Taulihawa and Beljhundi are not able to cover O&M costs with high operating ratios.

Residential connection fee (Average – NRs10,661)

Apart from reasonable connection fee, allowing payments by installment can assist poor households to gain access to direct connection to their homes with significant benefits to their welfare. Many of the service providers surveyed allow payment of residential connection fees by installment. However, it is interesting to note that the average connection fee is 45 times the average monthly bill per connection. The lowest domestic connection fee is charged by Belbari (NRs500) followed by Mangadh (NRs1,250), Bhairahawa (NRs1,980), Tankisinwari (NRs3,000), Khajura (NRs3,560), Gaur (NRs3,725), Mahendranagar W (NRs3,960) and Bharatpur (NRs4,000). Nine service providers charged connection fees of NRs20,000 or more, starting with Prithvinarayan (NRs43,000), Ghorahi (NRs30,035), Shivalaya (NRs29,500), Beni (NRs25,000), Tulsipur (NRs20,500), Lamahi (NRs20,135) and Khairanitar, Bijuwar and Bhimad (NRs20,000).

Staff per 1,000 connections ratio (Average – 7.2)

This indicator is generally used to measure the efficient use of human resources in a service provider as manifested by low staff/1,000 connection ratio. The service providers with the lowest ratio are Gairidkot (2.3), Ratnanagar (2.4), Lakhapur (2.8), Bharatpur (3.0), Itahari (3.3), Shankarnagar (3.5), Leknath and Nayagaun (3.6). Those with high staff/1,000 connections ratio are Dolakha (29.8), Jaleswor (21.4),

Krishnanagar and Gaur (15.5), Bijuwar (12.3) and Bhadrapur (11.9). Other than downsizing, improvement in this indicator can be achieved by training of staff in different aspects of operations, such as pumping, treatment plant operations, billing and collection, leak control and management, etc. Investments in capacity building are important if efficient and sustainable operations are to be attained.

OVERALL PERFORMANCE OF NEPAL WATER SERVICE PROVIDERS

Overall performance of a water service provider can be rated in four areas of management, namely, customer service, water resources, financial, and human resources management. Table 2 shows the comparison of performance in terms of indicator averages of the 32 water service providers from Nepal in 2013 and 2014 (except Galyang) and the overall performance of 63 service providers for 2014 including 32 service providers who were participating in the benchmarking and performance assessment program for the first time.

Table 2: Comparison of Overall Performance

Indicators	Nepal 2013 (n=32)	Nepal 2014 (n=31 of 32)	Nepal 2014 (n=63)
Water Coverage (%)	63.6	63.4	63.4
Water Availability - dry months (hours/day)	12.3	13.3	10.7
Water Availability - wet months (hours/day)	13.2	14.4	12.3
Consumption/Capita (lpcd)	73.0	69.9	70.4
Non Revenue Water (%)	17.4	22.2	21.6
Connections Metered (%)	98.5	98.9	93.4
Operating Ratio	0.93	0.83	1.02
Accounts Receivable (months)	0.5	0.9	1.4
Collection Efficiency (%)	99.1	98.4	98.6
Staff/1,000 Connections (ratio)	5.9	5.2	7.2

Customer Satisfaction

Customer satisfaction can be measured in terms of coverage, water availability and average daily consumption. Efficient service providers strive for 100% coverage, 24-hour availability and daily consumption of about 100-120 lpcd. Nepal's service providers need a

lot of efforts and resources to reach these levels of performance. Both water coverage (63.4%) and consumption per capita (70.4 lpcd) are constrained by lack of water sources requiring investments in developing additional sources. About 1/3 of the service

providers have at least 80% coverage. However, coverage targets should also consider other existing sources used by those who are not connected to the service providers as supply from these sources may not make 100% coverage possible. Water availability (10.7 hours/day in dry months and 12.3 hours per day in wet months) were brought to the 24 hours per day level by about half of the service providers mostly with the use of power generators. These are doable solutions to the electric power constraint as long as the resulting tariff adjustments are still affordable to consumers.

Water Resources Management

The single most important parameter to indicate performance under water resources management is non revenue water (NRW). However, it is equally important that NRW values are obtained through accurate measurement of production and consumption with no less than 100% metering of all sources of production and all service connections. While the average NRW looks good at 21.7%, the NRW values need to be used with caution as only 13 service providers have full metering of both production and consumption. Full metering will be required before any realistic assessment of water losses can be made. Meanwhile, volumetric estimates of production and consumption estimates from other metered connections are being used by some service providers.

Financial Management

The most important measures of financial management are operating ratio, accounts receivable and collection efficiency. Nepal service providers are doing quite well managing their finances with average operating ratio of 1.02 where revenues from tariffs are almost enough to cover O&M expenses. Overall accounts receivable

equivalent of 1.4 months is manageable. Collection efficiency of 98.6% means that close to all bills are collected. However, requirements for new sources to increase coverage and per capita supply will require additional expenses and will require tariff increases. Bringing operating ratio to 0.75 would be a realistic target considering that the operating ratio of the top quartile is 0.69 meaning 25% of the service providers were able to achieve or surpass this level. This is even more important when considering other liabilities such as repayment of loans and adjustment of interest. Collecting all the bills on time helps a service provider finance required operating expenses when they are needed.

Human Resources Management

The most common measure for human resources management is staff/1,000 connections. Management and staff are the most important resources of a water service provider. The average staff per 1000 connections ratio of Nepali service providers is 7.2 with a median of 5.7 meaning half of them are doing better than 5.7. Gaidakot has the lowest at 2.3 with its 9 staff managing 4,000 connections and they are doing well in all areas of customer service, financial, water resources and human resources management even with the second lowest tariff. Thirty-three of the service providers did not send any staff for training in 2014 while the rest sent 77 staff for training. Four of the service providers sent a total of 23 staff for training funded from their own budget. In consultation with the National Water Supply and Sanitation Training Centre at Nagarkot, investment in further training and capacity building for WSP staff should be sought. Performance improvement and a reduction of staff/1000 connections will be the economically sound consequence.

GENERAL CONCLUSIONS

Data Availability and Reliability - The data presented in this data book give a comprehensive picture of the performance of 63 water service providers in Nepal. The performance indicators were derived from information provided by the participating service providers. It should be noted that the reliability of a number of important indicators for some service providers, such as per capita consumption, NRW and financial indicators related to consumption and billing, are suspect in the absence of full metering and should be used with caution. Any performance improvement program will have to improve measurement and recording of operational information as a first step in getting a complete assessment of any water service provider's overall performance.

Performance Improvement Needs - Overall, Nepal water service providers will have to increase water availability to 24 hours, and strive to increase coverage and the supply of water to their consumers over time. A number of service providers manage to provide 24 hours supply by investing in backup power generators. Realistic assessments of NRW should be determined starting with full metering of production and consumption. Financial management appears well enough but some improvements in operating ratio can still be done. Raising tariffs will allow the utilities to finance development of new sources to increase coverage and the amount of water supplied to its consumers. Efficiencies in the different areas of operations can be gained with skilled and qualified staff.

The service providers would do well in investing in training and building the capabilities of their staff and managers. Thirty-four service providers have no personnel trained during the past year while those that sent staff for training averaged 2.57 staff per service provider led by Bharatpur (15), Bardghat (7), Mangadh (7) Kakarvitta (5) and Damak (4). DWSS can take the initiative in developing the training programs through the National Water Supply and Sanitation Training Centre (NWSSTC, earlier CHRDU) to overcome the lack of available training programs for service providers.

Apart from addressing the water quantity issue, water quality should be addressed as well. About 42 water service providers have water safety plans in place. Lamahi, Nayagaun and Salakpur which are drawing groundwater have no water treatment at all while the remaining 60 have at least chlorination. However, residual chlorine tests were not done in 20 service providers who are chlorinating their supply with 16 others having less than 12 samples tested in 2014.

Given the above assessment, the water supply sector stakeholders in Nepal need to start focusing on the following:

- Advocacy for more investment in the sector and greater coverage;
- 24-hour supply to all consumers;
- 100% metering of both production and consumption;
- Management of water losses by keeping NRW in check, appropriate pricing, and public awareness;
- Phasing out of community taps and other sources of free water. Alternative arrangements using a community managed, metered community tapstand, can be made to ensure that water is provided at affordable rates to poor users;
- Water quality monitoring following the Nepal Drinking Water Quality Standards and implementation of water safety plans ;
- Improved billing and collection efficiency;
- Revise its tariffs to cover O&M costs and costs of expansion and replacements or debt service according to business plan approach;

- Investment in capacity-building for staff and management as offered in the national training program being developed by NWSSTC;
- Regular monitoring of performance through appropriate management information systems; and
- Support to the urban poor through lifeline rates and installment payment of connection fees.

Institutionalization of Benchmarking and Performance Improvement – Benchmarking has been used as a tool for improving performance of water utilities in Asia as early as 1993 when ADB published the Water Utilities Data Book for the Asian and Pacific Region. This was followed by a second data book in 1997 and the Water in Asian Cities in 2003. These publications were followed by the promotion of water operators' partnerships in recent years where better performing water utilities cooperate as mentors to recipient utilities. This was promoted in Asia by the ADB, the US Agency for International Development (USAID) and the International Water Association (IWA). Such partnerships have helped many Asian water utilities in improving their performance.

Some national associations like PERPAMSI of Indonesia, the Philippine Association of Water Districts, the Vietnam Water and Sewerage Association have also instituted partnerships among their members. The Bangladesh Water Utilities Network has undertaken similar activities with support from the Water and Sanitation Program (WSP) of the World Bank.

These are examples of how benchmarking activities have led to performance improvements starting with the collection and analysis of reliable performance information from water service providers. Sharing of good practices among members of national water associations and water utilities networks shows lessons in performance improvement among peers. There are already such examples among Nepal's water service providers that can be gathered from this data book.

The results of the benchmarking and performance assessment programs for 32 and 63 water service providers in the last two years, respectively, would be a good starting point for performance improvement among the utilities through sharing of experience and expertise among themselves.

PART II

UTILITIES COMPARISONS
(Figures and Tables)

Table 3: Names and Locations of Water Service Providers (a)

VDC/Town	District	Area Population	Data Year	Name of Water Service Provider
Aanbukhaireni	Tanahu	15,000	2013 - 2014	Aanbukhaireni Khanipani Upbhokta Tatha Sarasafai Samitee
Attariya	Khailali	18,000	2013 - 2014	Attariya Drinking Water and Sanitation Users' Association
Baglung	Baglung	60,000	2013 - 2014	Baglung Urban Water and Sanitation Users Association
Banepa	Kavre	59,320	2013 - 2014	Nepal Water Supply Corporation, Banepa
Bardghat	Nawalparasi	17,000	2013 - 2014	Bardghat Water Supply and Sanitation Users Association
Belbari	Morang	25,000	2013 - 2014	Belbari Small Town Water and Sanitation Users Committee
Beljhundi	Dang	16,793	2013 - 2014	Beljhundi Water Supply and Sanitation Users Association
Beni	Myagdi	15,600	2013 - 2014	Beni Water Supply and Sanitation Users Association
Besishahar	Lamjung	30,000	2013 - 2014	Besishahar Water Supply and Sanitation Users Committee
Bhadrapur	Jhapa	59,320	2013 - 2014	Nepal Water Supply Corporation, Bhadrapur
Bhairahawa	Rupandehi	108,558	2013 - 2014	Nepal Water Supply Corporation, Bhairahawa
Bharatpur	Chitwan	130,000	2013 - 2014	Bharatpur Water Supply Management Board
Bhimad	Tanahu	6,252	2013 - 2014	Bhimad Water Supply and Sanitation Users Committee
Bijuwar	Pyuthan	20,000	2013 - 2014	Brihat Bijuwar Small Town Drinking Water Users and Sanitation Association
Budhabare	Jhapa	30,345	2013 - 2014	Budhabare Small Town Drinking Water and Sanitation Users Association
Chainpur	Bajhang	10,000	2013 - 2014	Chainpur Drinking Water and Sanitation Consumer Committee
Chandragadhi	Jhapa	18,092	2013 - 2014	Chandragadhi Water Users and Sanitation Committee
Damak	Jhapa	49,046	2013 - 2014	Damak Water Supply and Sanitation Users Association
Damauli	Tanahu	26,000	2013 - 2014	Damauli Water Supply and Sanitation Users Association
Dhangadhi	Khailali	110,000	2013 - 2014	Nepal Water Supply Corporation, Dhangadhi
Dhulabari	Jhapa	25,200	2013 - 2014	Dhulabari Water Users and Sanitation Committee
Dhulikel	Kavre-palanchok	37,400	2013 - 2014	Dhulikel Drinking Water and Sanitation Users Committee
Dolakha	Dolakha	1,750	2013 - 2014	Dolakha Bazar Water Users and Sanitation Committee
Duhabi	Sunwari	22,000	2013 - 2014	Duhabi Water Supply Project Main Users Committee
Fikkal	Ilam	10,000	2013 - 2014	Fikkal Drinking Water and Sanitation Users Association
Gaindakot	Nawalparasi	30,000	2013 - 2014	Gaindakot Water Supply Users and Sanitation Organization
Gaur	Rautahat	16,000	2013 - 2014	Nepal Water Supply Corporation, Gaur
Gauradaha	Jhapa	20,155	2013 - 2014	Gauradaha Water and Sanitation Users Committee
Ghorahi	Dang	54,388	2013 - 2014	Ghorahi Drinking Water Users and Sanitation Association
Haraicha	Morang	10,000	2013 - 2014	Haraicha Water Supply and Sanitation Users Committee
Hetauda	Makwanpur	84,000	2013 - 2014	Hetauda Water Supply Management Board
Itahari	Sunsari	10,000	2013 - 2014	Itahari Small Town Water Supply and Sanitation Users Association
Jaleswor	Mahottari	30,000	2013 - 2014	Nepal Water Supply Corporation, Jaleswor

Table 3: Names and Locations of Water Service Providers (b)

VDC/Town	District	Area Population	Data Year	Name of Utility
Kakarvitta	Jhapa	40,000	2013 - 2014	Kakarvitta Water Users and Sanitation Association
Karmaiya	Sarlahi	15,000	2013 - 2014	Karmaiya Drinking Water and Sanitation Users Committee
Kawasoti	Nawalparasi	53,000	2013 - 2014	Kawasoti Water Supply and Sanitation Users Association
Khairanitar	Tanahu	9,500	2013 - 2014	Khairanitar Small Town Water Supply and Sanitation Users Association
Khajura	Banke	9,500	2013 - 2014	Khajura Drinking Water Consumer and Sanitation Committee
Krishnanagar	Kapilvastu	30,000	2013 - 2014	Nepal Water Supply Corporation, Krishnanagar
Lakhanpur	Jhapa	19,690	2013 - 2014	Lakhanpur Water Supply and Sanitation Users Committee
Lamahi	Dang	17,069	2013 - 2014	Lamahi Water Supply and Sanitation Users Committee
Leknath	Kaski	58,816	2013 - 2014	Lekhnath Small Town Water Supply and Sanitation User Committee
Mahendranagar N	Kanchanpur	37,247	2013 - 2014	Nepal Water Supply Corporation, Mahendranagar
Mahendranagar W	Kanchanpur	15,000	2013 - 2014	Mahendranagar Water Users and Sanitation Association
Mangadh	Morang	66,766	2013 - 2014	Birat/Mangadh Water Supply and Sanitation Users Committee
Nayagaun	Rupandehi	25,000	2013 - 2014	Nayagaun Water Supply Users and Sanitation Association
Parsa	Chitwan	29,154	2013 - 2014	Parsa Small Town Water Supply and Sanitation Consumers' Association
Pathari	Morang	49,270	2013 - 2014	Pathari Water Users and Sanitation Committee
Pragatinagar	Nawalparasi	17,100	2013 - 2014	Pragatinagar Water Supply and Sanitation Users Committee
Prithvinarayan	Gorkha	7,300	2013 - 2014	Prithvinarayan Small Town Drinking Water & Sanitation Users' Committee
Ratnanagar	Chitwan	52,000	2013 - 2014	Ratnanagar Water Supply and Sanitation Users Association
Salakpur	Morang	25,000	2013 - 2014	Salakpur Water Supply and Sanitation Users Committee
Shanischare	Jhapa	15,000	2013 - 2014	Shanischare-Arjundhara Water Supply and Sanitation Users Association
Shankarnagar	Rupandehi	45,000	2013 - 2014	Shankarnagar Water Users and Sanitation Association
Shivalaya	Parbat	14,194	2013 - 2014	Shivalaya Water Supply User and Sanitation Organization
Siddeshwor	Sindhuli	40,000	2013 - 2014	Siddeshwor Water Users and Sanitation Committee
Simara	Bara	22,000	2013 - 2014	Simara Water Users and Sanitation Committee
Sunwal	Nawalparasi	20,000	2013 - 2014	Sunwal Water Users and Sanitation Committee
Surunga	Jhapa	21,632	2013 - 2014	Surunga Water Supply and Sanitation Users Association
Tankisinwari	Morang	30,000	2013 - 2014	Tankisinwari Water Supply Users and Sanitation Committee
Taulihawa	Kapilvastu	40,000	2013 - 2014	Nepal Water Supply Corporation, Taulihawa
Tulsipur	Dang	90,000	2013 - 2014	Tulsipur Water Supply and Sanitation Users Association
Urlabari	Morang	16,000	2013 - 2014	Urlabari Water Supply Users and Sanitation Association

Table 4: Size of Utilities (a)

Utility	Production (m ³ /day)	Utility	Number of Connections	Utility	Number of Staff	Utility	People Served
Bharatpur	14,992	Bharatpur	16,000	Bharatpur	48	Bharatpur	100,000
Hetauda	8,036	Hetauda	10,770	Hetauda	43	Itahari	80,000
Itahari	6,993	Itahari	10,069	Banepa	34	Hetauda	70,000
Leknath	4,493	Leknath	7,269	Tulsipur	34	Tulsipur	70,000
Gaindakot	4,492	Ghorahi	5,142	Itahari	33	Kawasoti	48,000
Shankarnagar	4,472	Kawasoti	4,870	Bhairahawa	27	Baglung	45,000
Dhangadhi	3,803	Tulsipur	4,716	Leknath	26	Leknath	45,000
Kawasoti	3,483	Ratnanagar	4,503	Ghorahi	26	Dhangadhi	45,000
Tulsipur	3,406	Dhangadhi	4,267	Dhulabari	24	Ghorahi	41,000
Bhairahawa	3,250	Gaindakot	4,000	Bhadrapur	20	Damak	37,728
Ghorahi	3,056	Shankarnagar	3,955	Dhangadhi	20	Bhairahawa	37,080
Nayagaun	2,925	Damak	3,835	Dhulikel	20	Shankarnagar	35,595
Ratnanagar	2,762	Bhairahawa	3,537	Kawasoti	20	Mangadh	29,322
Damak	2,608	Mangadh	3,258	Kakarvitta	19	Kakarvitta	29,000
Chandragadhi	2,592	Banepa	3,194	Besishahar	18	Besishahar	28,000
Pragatinagar	2,074	Baglung	3,001	Gaur	17	Siddeshwor	27,500
Shivalaya	1,956	Kakarvitta	2,997	Mahendranagar N	17	Ratnanagar	26,000
Damauli	1,926	Dhulabari	2,977	Shivalaya	16	Banepa	24,650
Kakarvitta	1,918	Pragatinagar	2,856	Baglung	15	Gaindakot	24,000
Mangadh	1,865	Parsa	2,747	Damak	15	Urlabari	22,085
Besishahar	1,742	Chandragadhi	2,688	Krishnanagar	15	Damauli	22,000
Simara	1,699	Bardghat	2,571	Siddeshwor	15	Dhulabari	20,500
Banepa	1,685	Damauli	2,514	Chandragadhi	14	Bhadrapur	20,440
Bardghat	1,609	Budhabare	2,500	Shankarnagar	14	Nayagaun	20,106
Mahendranagar N	1,572	Besishahar	2,351	Damauli	13	Parsa	18,900
Baglung	1,555	Surunga	2,282	Parsa	13	Dhulikel	18,500
Parsa	1,543	Nayagaun	2,234	Urlabari	13	Krishnanagar	18,000
Dhulabari	1,521	Urlabari	2,225	Simara	13	Pragatinagar	16,500
Krishnanagar	1,500	Siddeshwor	2,188	Mangadh	12	Chandragadhi	15,708
Urlabari	1,473	Mahendranagar W	2,020	Sunwal	12	Bardghat	15,090
Dhulikel	1,449	Dhulikel	2,008	Bardghat	12	Budhabare	15,000
Bhadrapur	1,326	Simara	1,998	Bijuwar	12	Shivalaya	13,802

Table 4: Size of Utilities (b)

Utility	Production (m³/day)	Utility	Number of Connections	Utility	Number of Staff	Utility	People Served
Duhabi	1,288	Attariya	1,936	Jaleshwor	12	Karmaiya	13,000
Budhabare	1,220	Shivalaya	1,904	Lamahi	12	Salakpur	13,000
Lamahi	1,151	Mahendranagar N	1,867	Pragatinagar	12	Sunwal	12,600
Taulihawa	1,055	Sunwal	1,800	Ratnanagar	11	Surunga	12,500
Siddeshwor	1,037	Bhadrapur	1,682	Attariya	11	Bijuwar	12,000
Attariya	944	Salakpur	1,600	Mahendranagar W	11	Mahendranagar N	12,000
Gaur	900	Gauradaha	1,465	Surunga	10	Gaur	11,765
Gauradaha	900	Karmaiya	1,296	Budhabare	10	Attariya	11,616
Surunga	900	Khairenitar	1,274	Taulihawa	10	Taulihawa	11,200
Mahendranagar W	888	Duhabi	1,251	Duhabi	9	Simara	11,000
Shanischare	827	Lamahi	1,248	Prithvinarayan	9	Pathari	10,494
Beni	820	Shanischare	1,190	Fikkal	9	Beni	10,120
Pathari	807	Pathari	1,166	Gaindakot	9	Aanbukhaireni	10,000
Karmaiya	776	Bhimad	1,156	Beni	8	Mahendranagar W	10,000
Khairenitar	744	Gaur	1,095	Nayagaun	8	Gauradaha	9,084
Tankisinwari	666	Lakhanpur	1,088	Salakpur	8	Shanischare	9,000
Aanbukhaireni	658	Tankisinwari	1,040	Gauradaha	7	Jaleshwor	8,930
Sunwal	645	Fikkal	1,010	Shanischare	7	Khairenitar	8,878
Salakpur	616	Bijuwar	977	Tankisinwari	7	Lamahi	8,500
Jaleshwor	612	Krishnanagar	968	Aanbukhaireni	7	Beljhundi	8,395
Bijuwar	600	Beni	920	Beljhundi	7	Tankisinwari	7,848
Lakhanpur	550	Taulihawa	902	Karmaiya	6	Lakhanpur	6,528
Prithvinarayan	514	Belbari	876	Khairenitar	6	Duhabi	6,200
Belbari	454	Aanbukhaireni	859	Khajura	6	Prithvinarayan	6,200
Khajura	450	Prithvinarayan	841	Belbari	5	Bhimad	5,924
Beljhundi	395	Beljhundi	657	Bhimad	5	Chainpur	5,200
Fikkal	389	Khajura	590	Pathari	5	Belbari	5,000
Bhimad	375	Jaleshwor	561	Dolakha	5	Fikkal	5,000
Haraicha	296	Haraicha	539	Chainpur	4	Haraicha	4,280
Chainpur	200	Chainpur	450	Haraicha	3	Khajura	2,950
Dolakha	178	Dolakha	168	Lakhanpur	3	Dolakha	1,400

Figure 1a: Production Volume

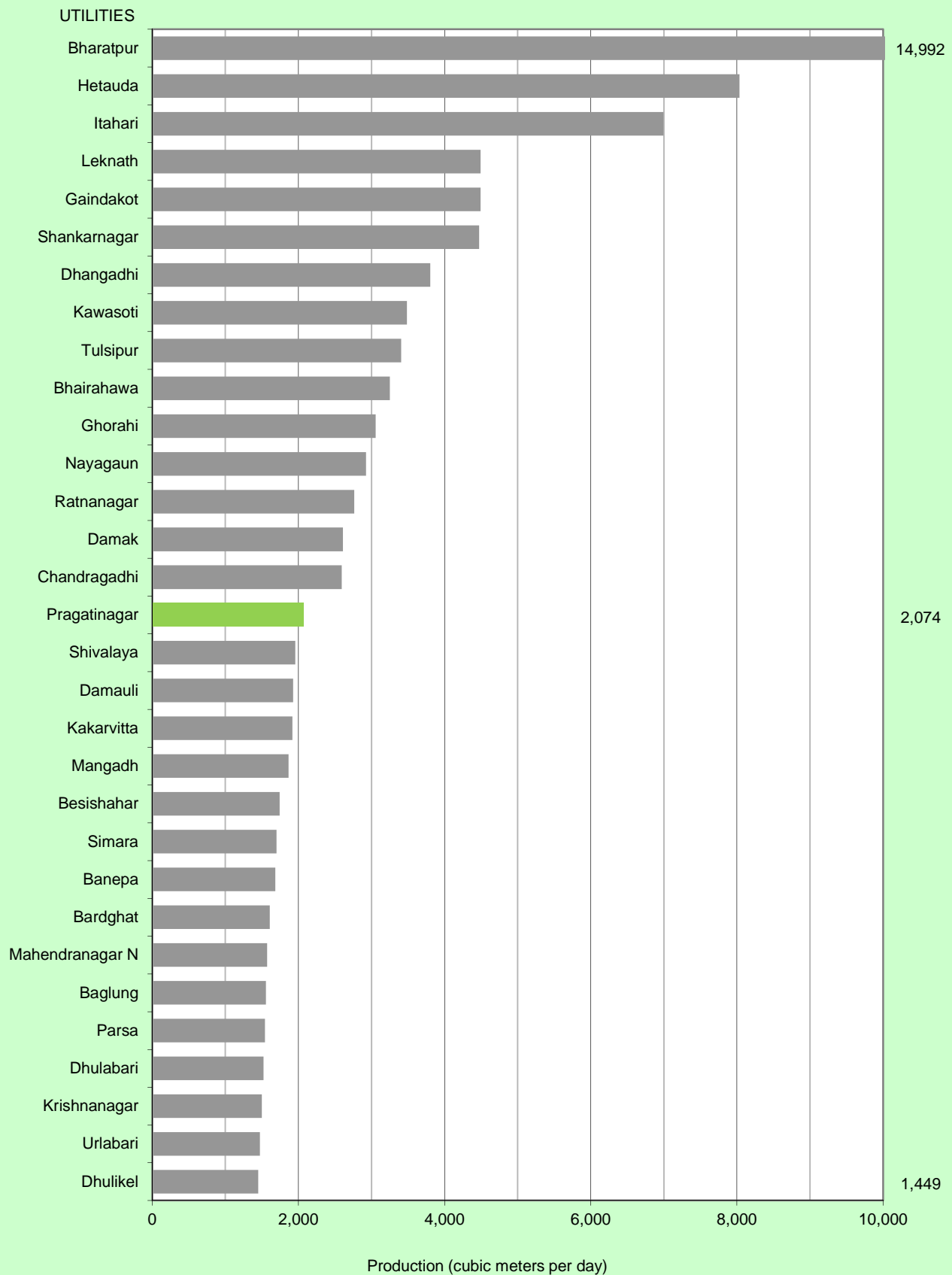


Figure 1b: Production Volume

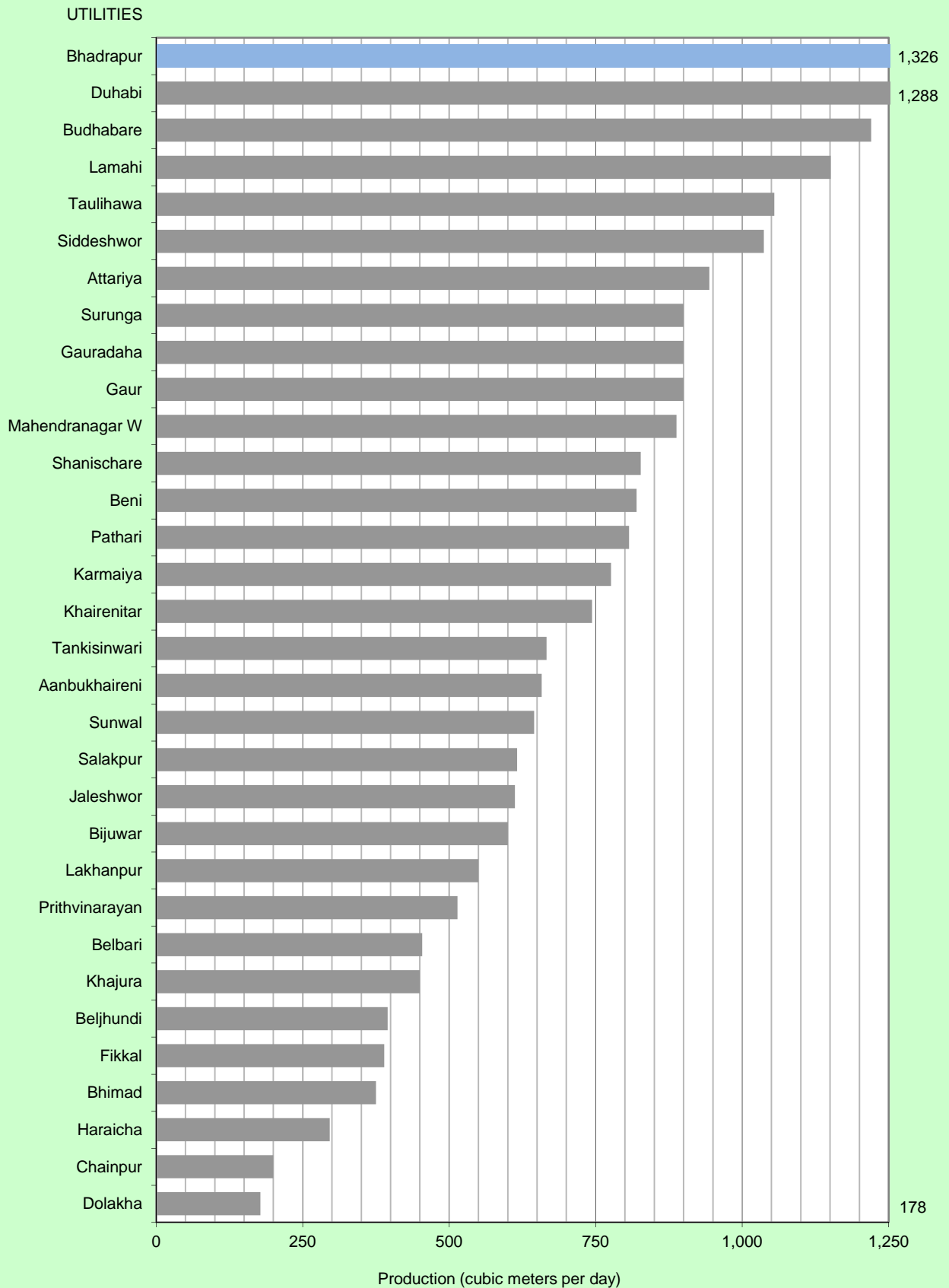
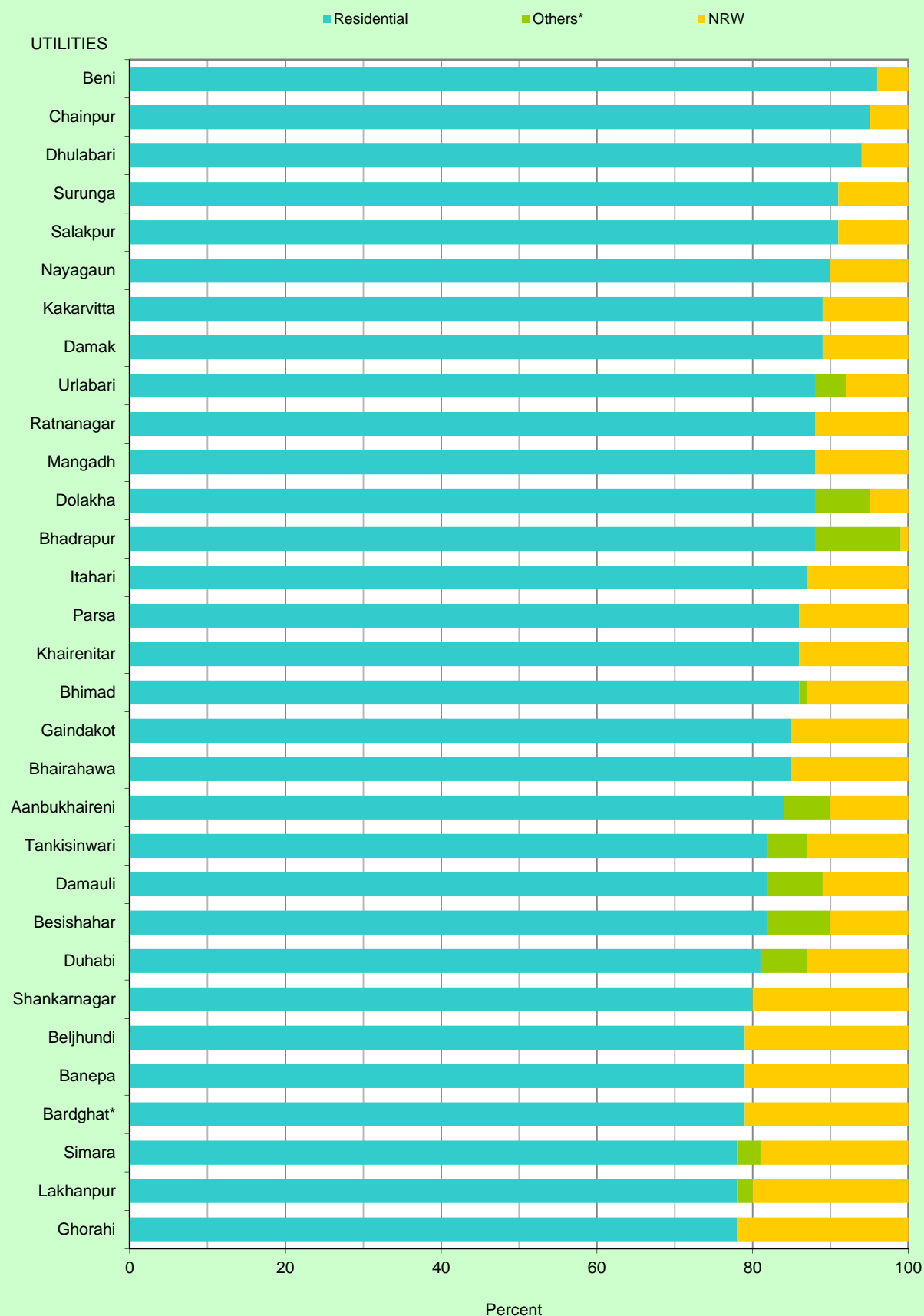


Figure 2a: Water Use



* Other use includes industrial, commercial, and institutional.

Figure 2b: Water Use

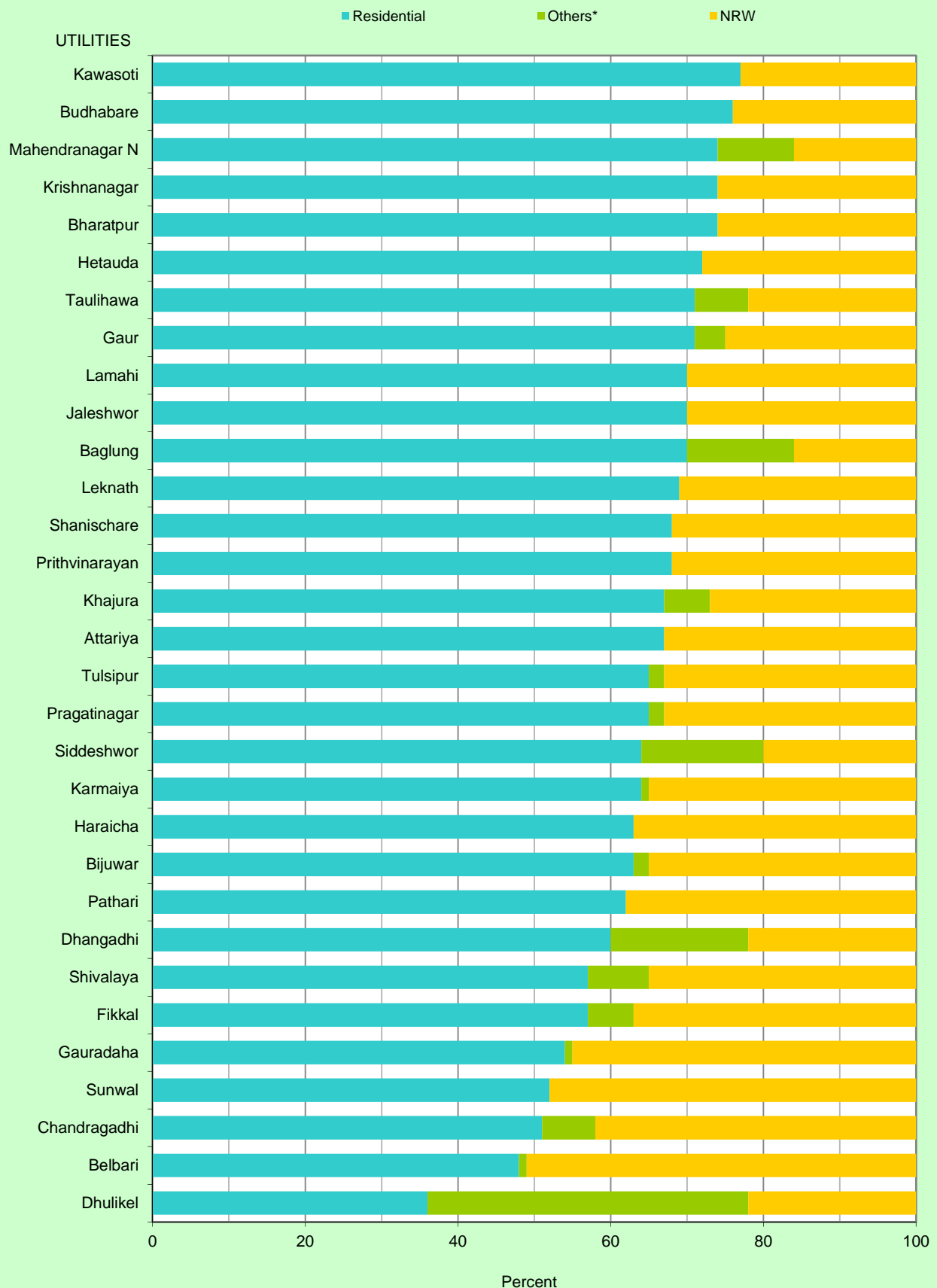


Figure 3a: Per Capita Consumption

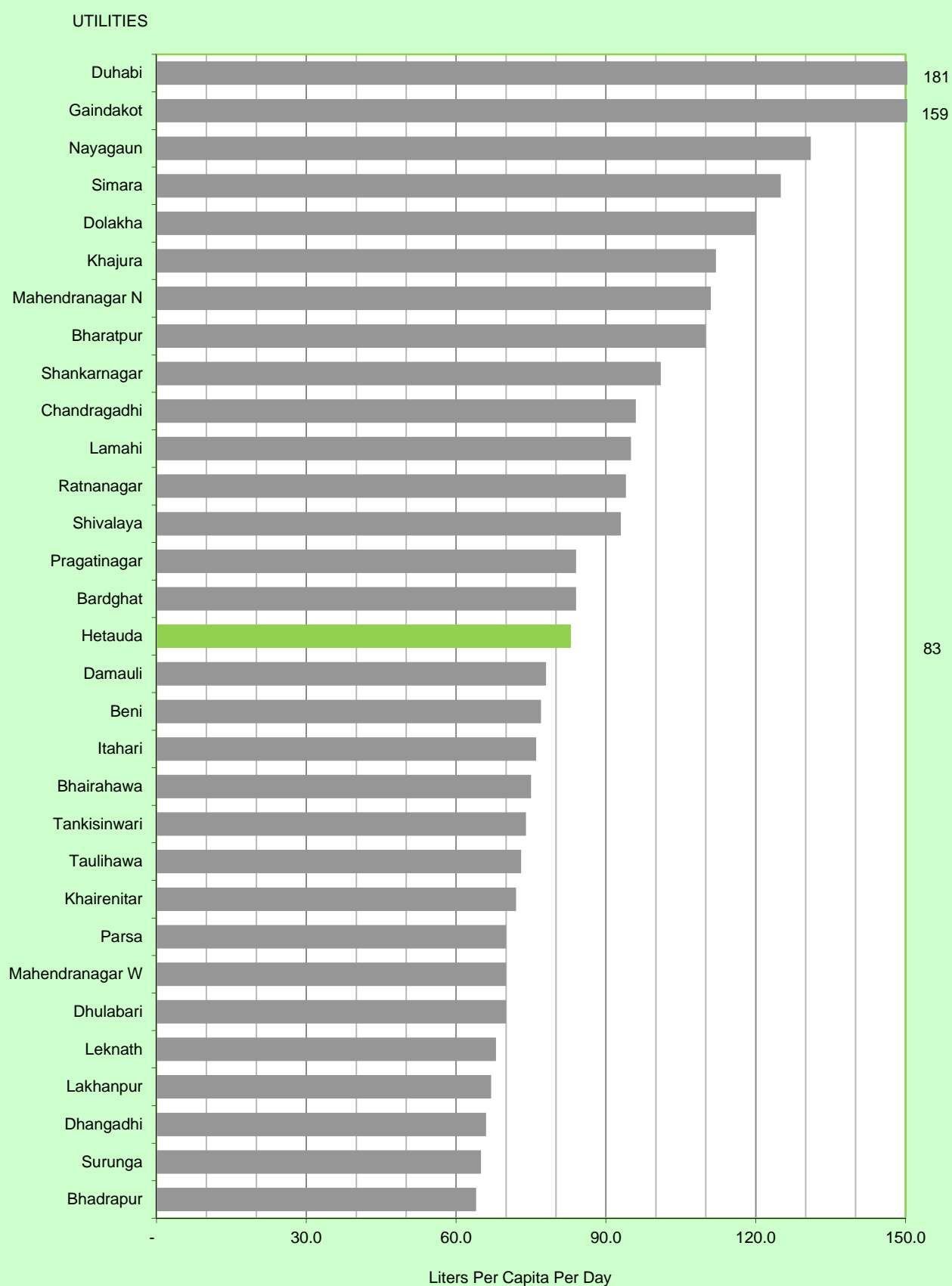


Figure 3b: Per Capita Consumption

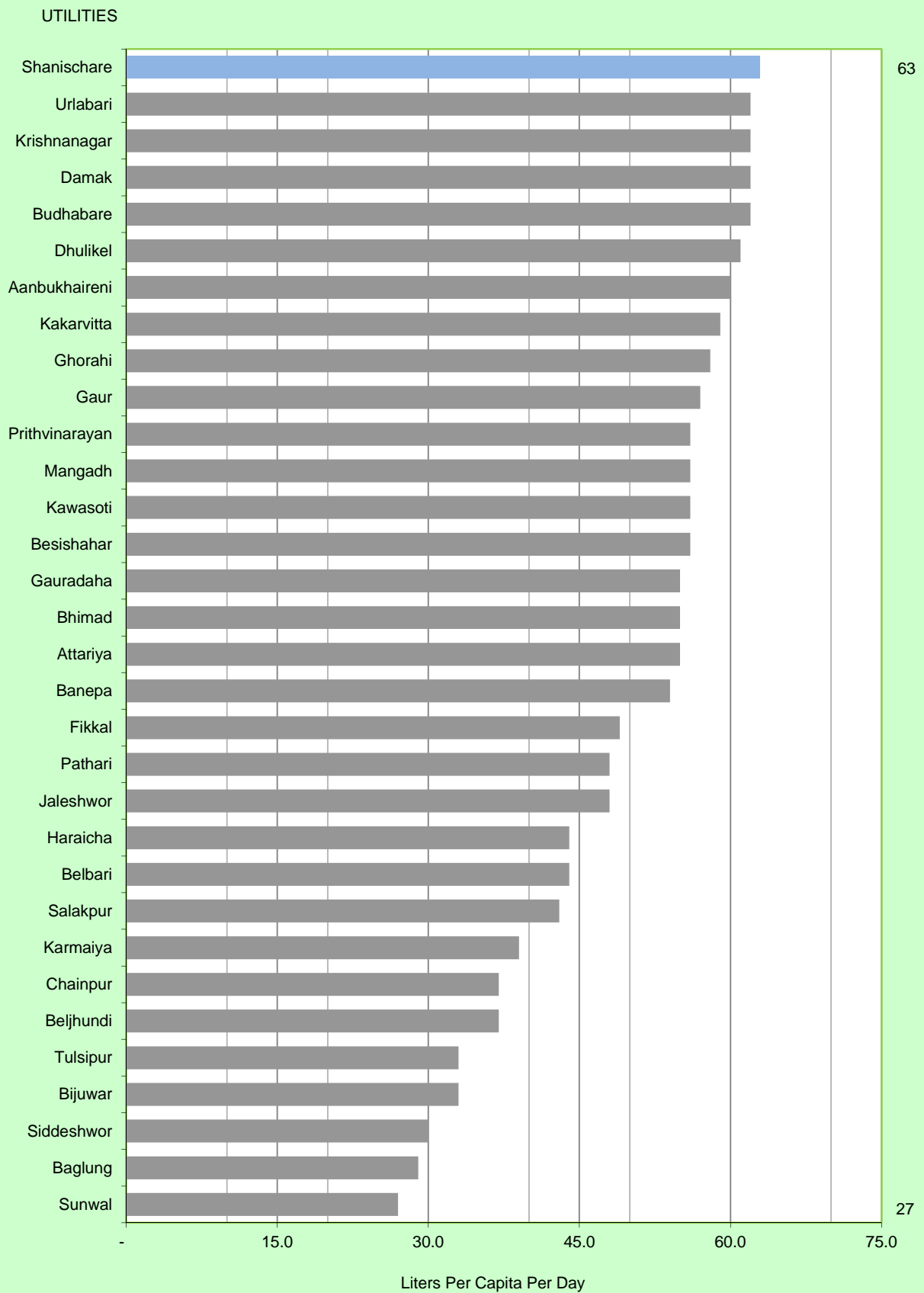


Figure 4a: Monthly Consumption Per Connection

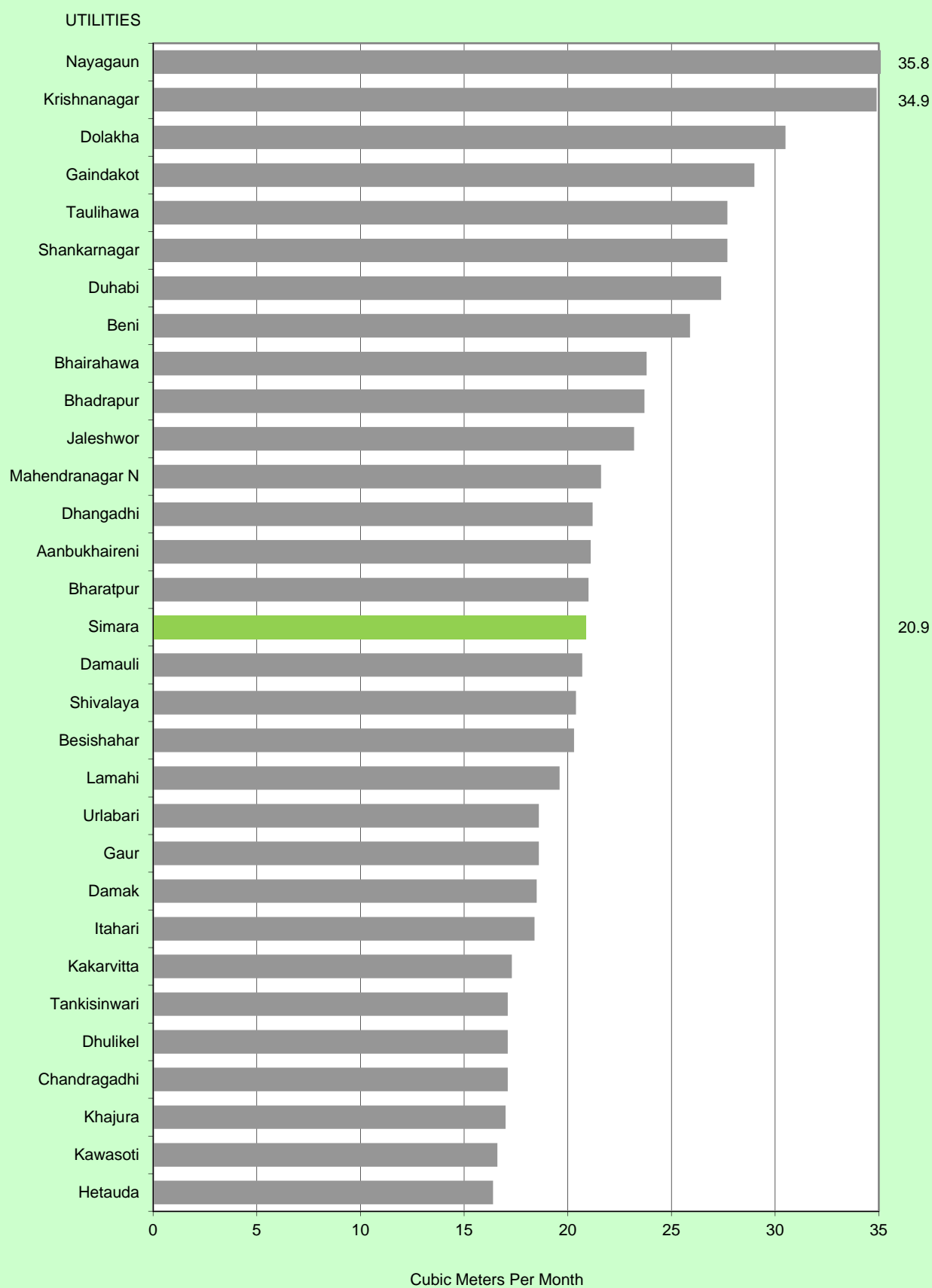


Figure 4b: Monthly Consumption Per Connection

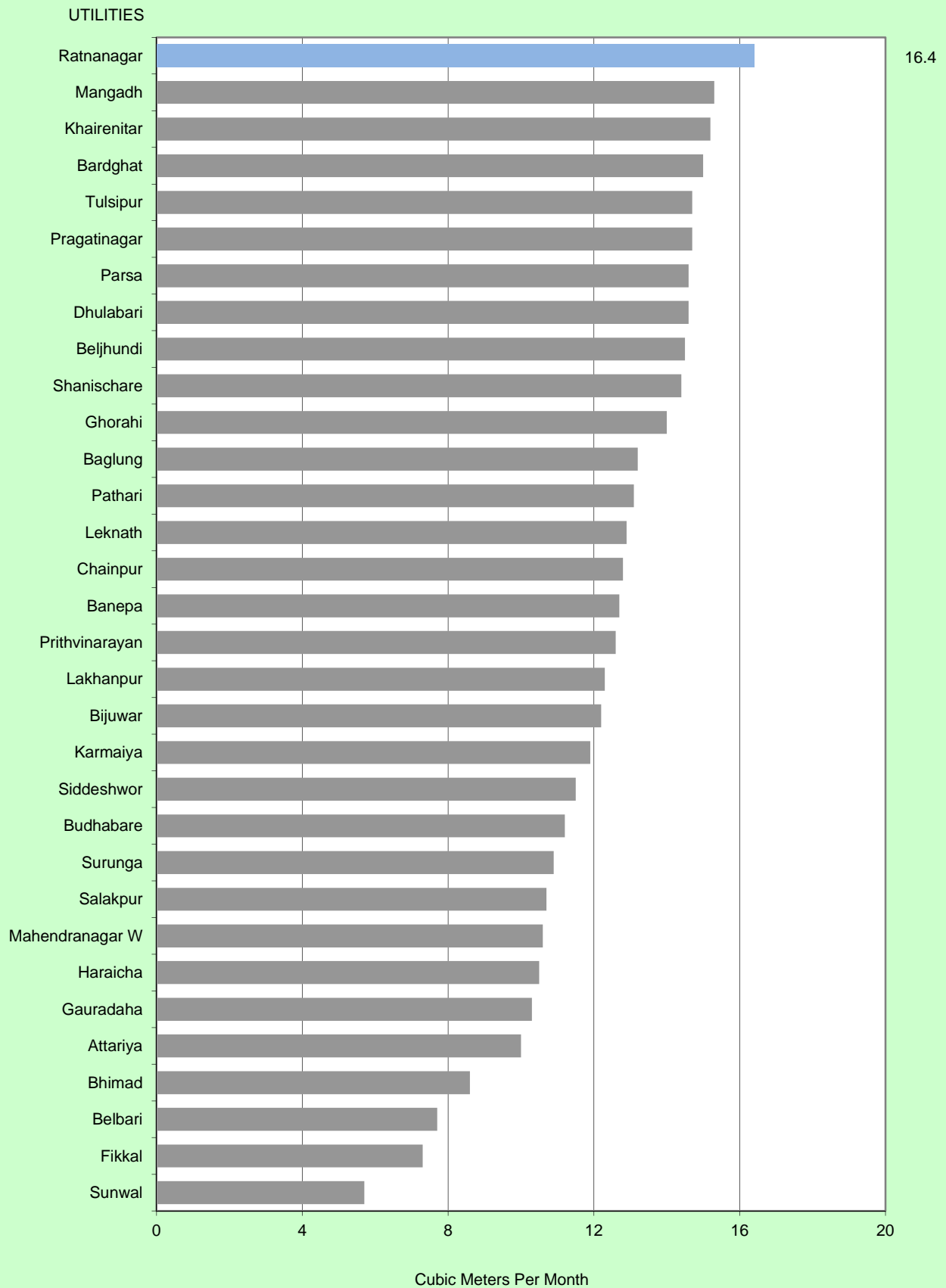


Figure 5a: Non Revenue Water

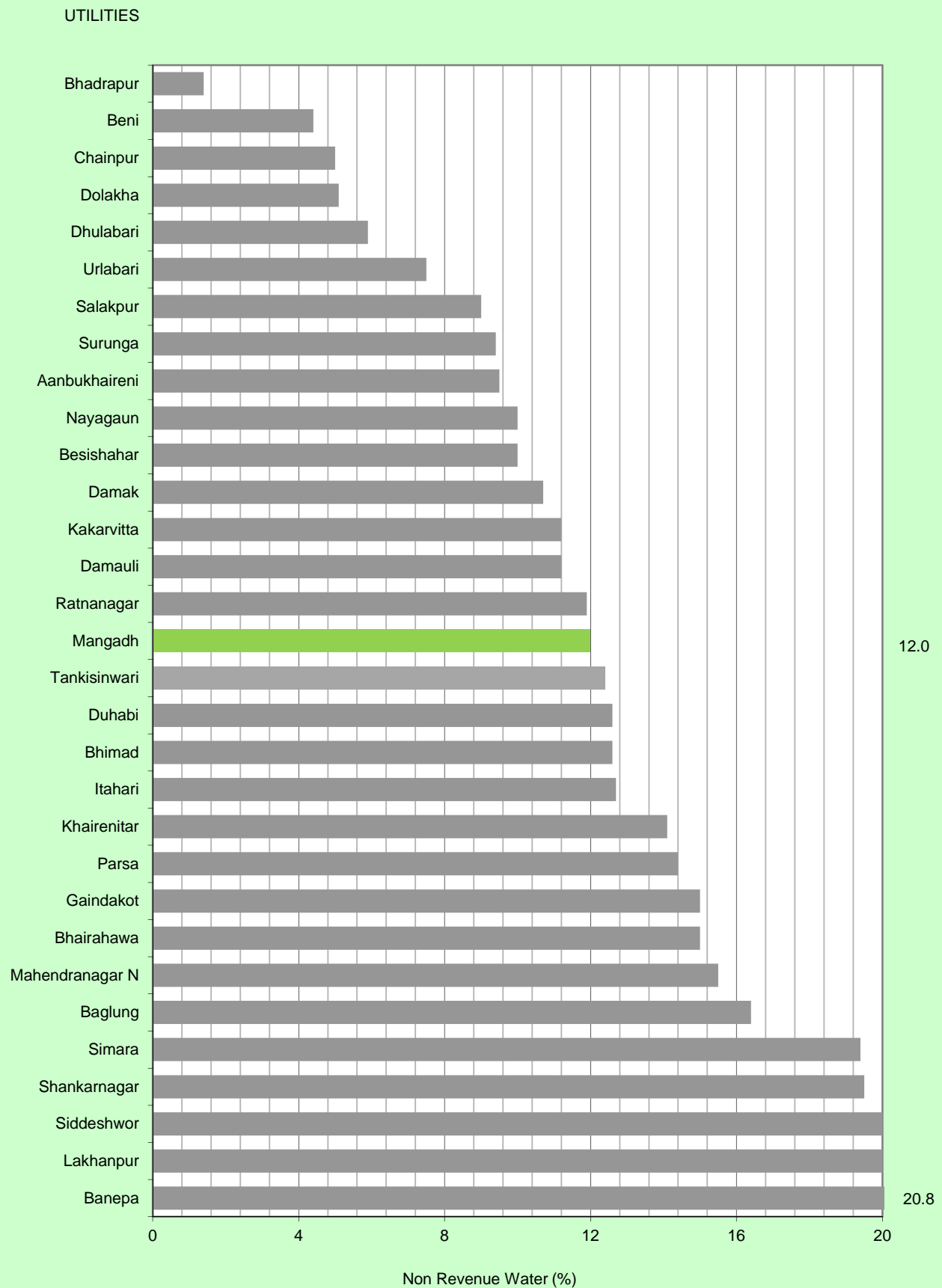


Figure 5b: Non Revenue Water

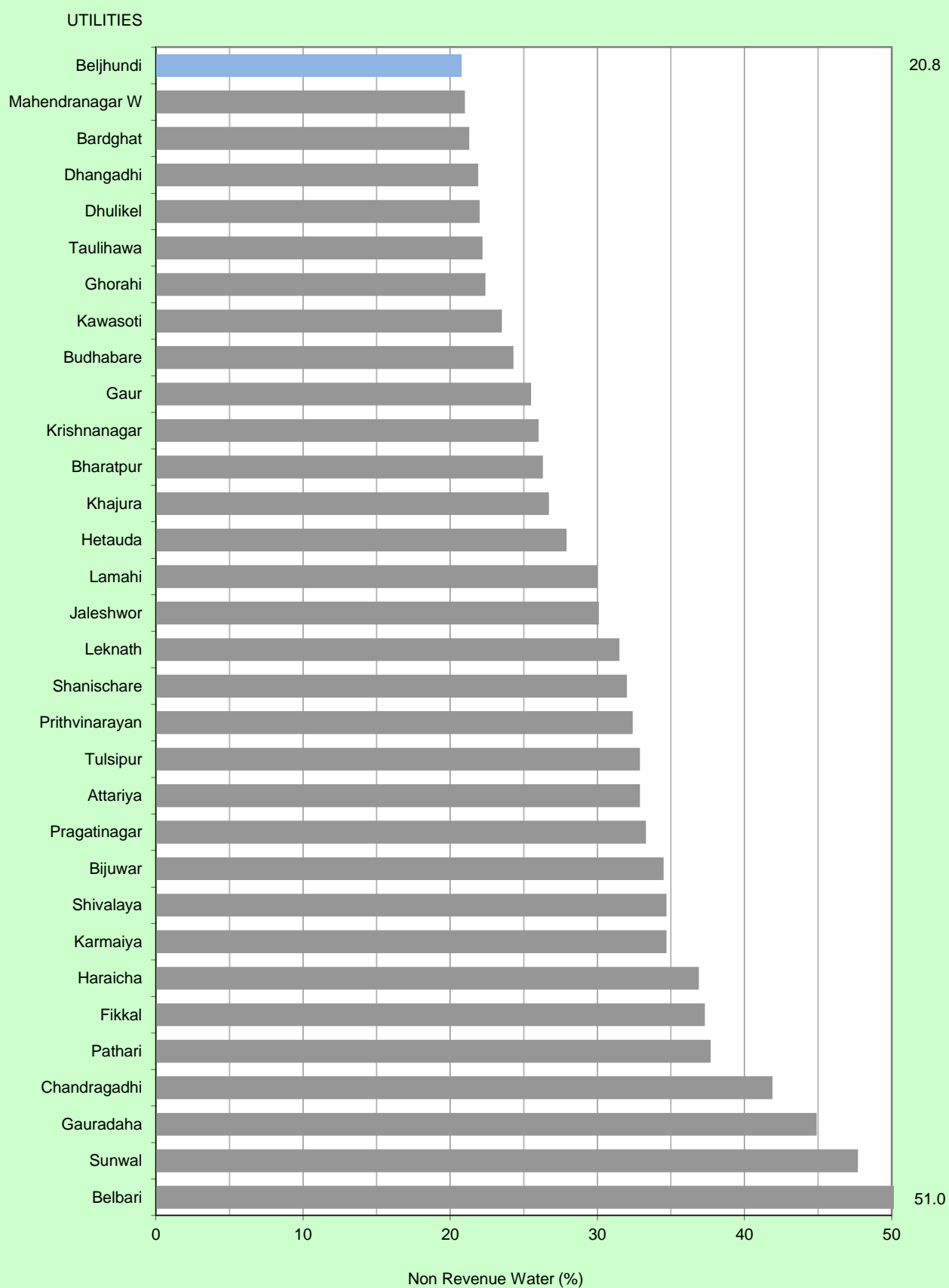


Figure 6: Consumer Metering

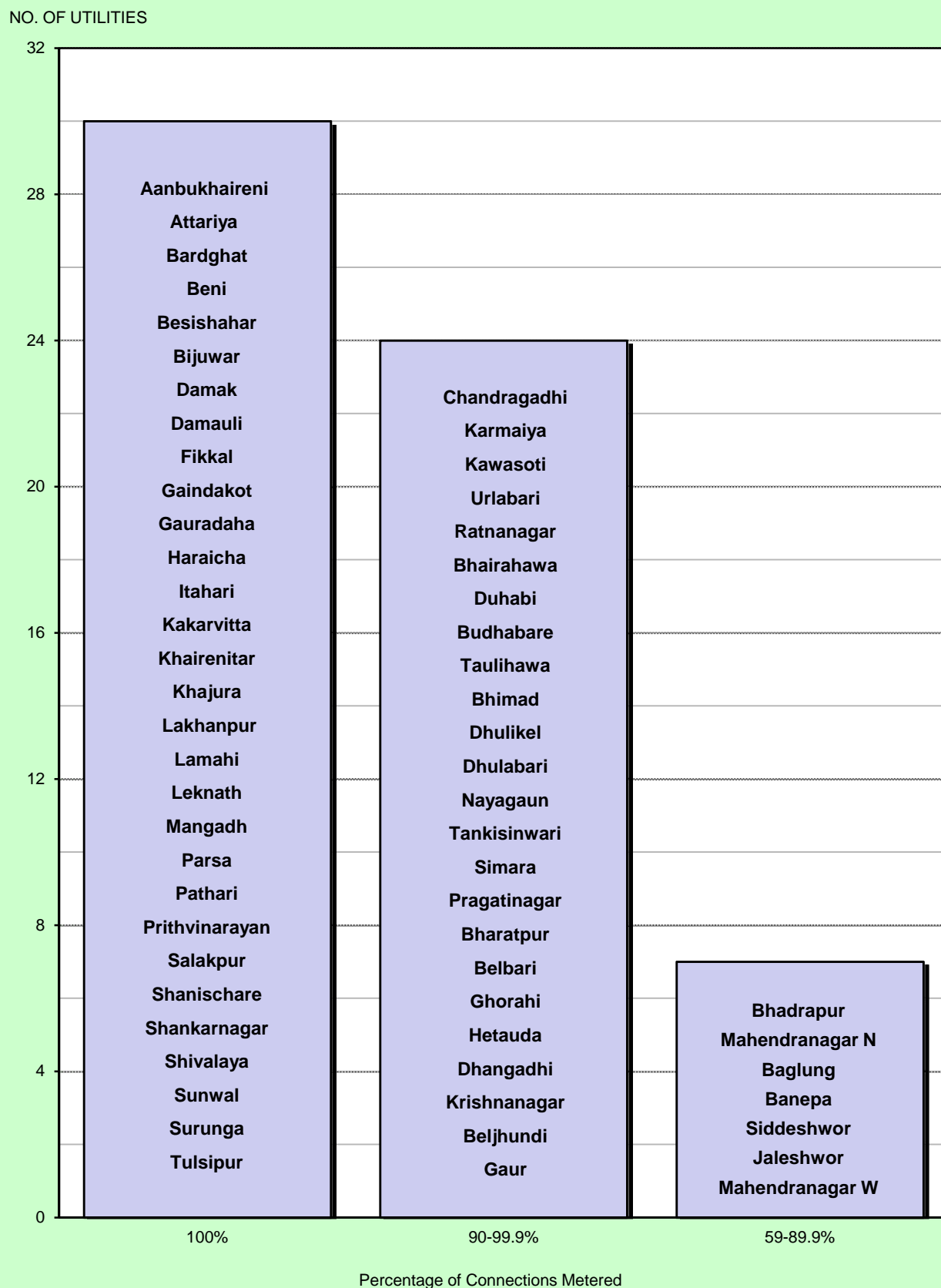


Figure 7: Production Metering

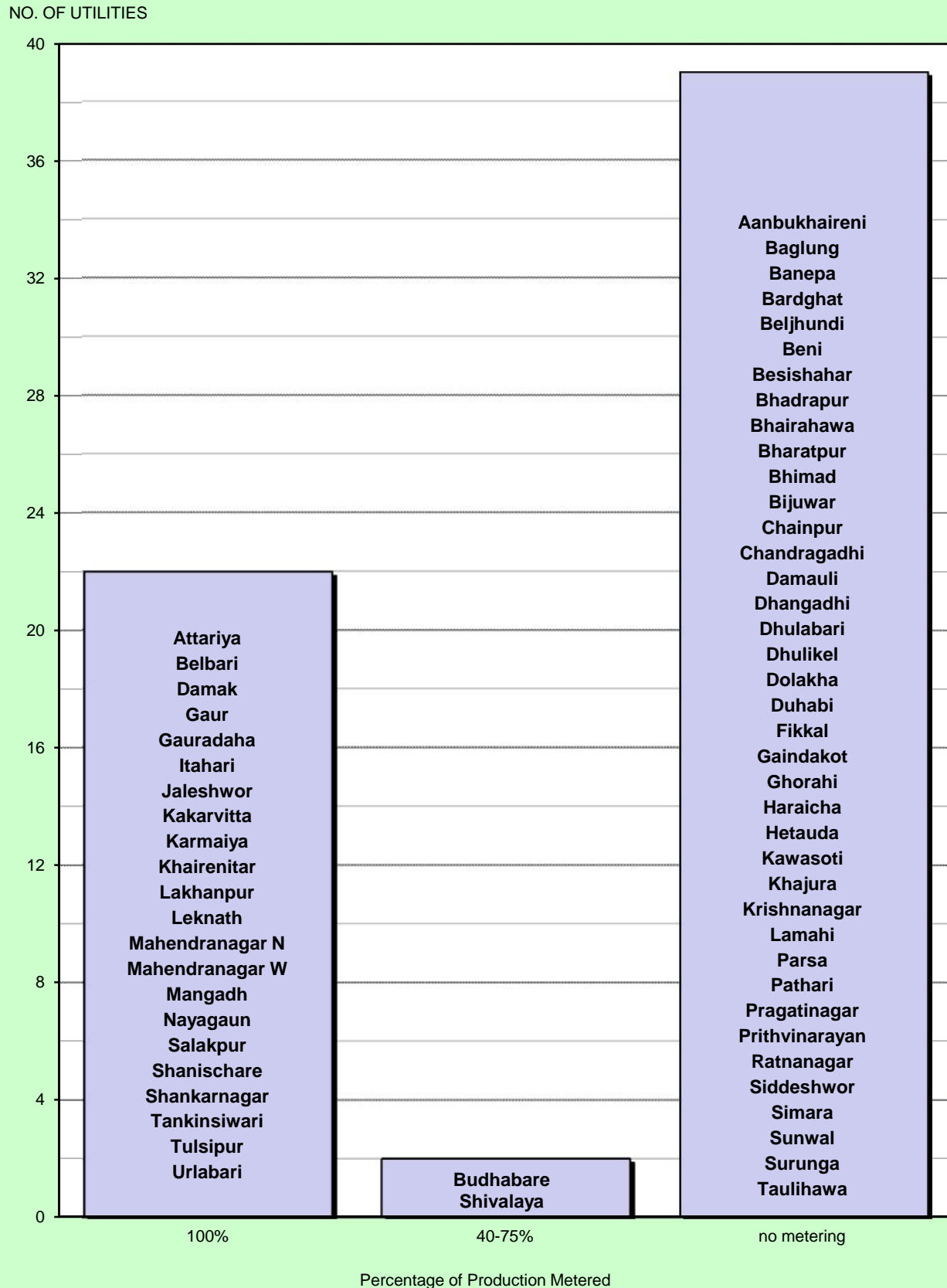


Figure 8a: Water Coverage

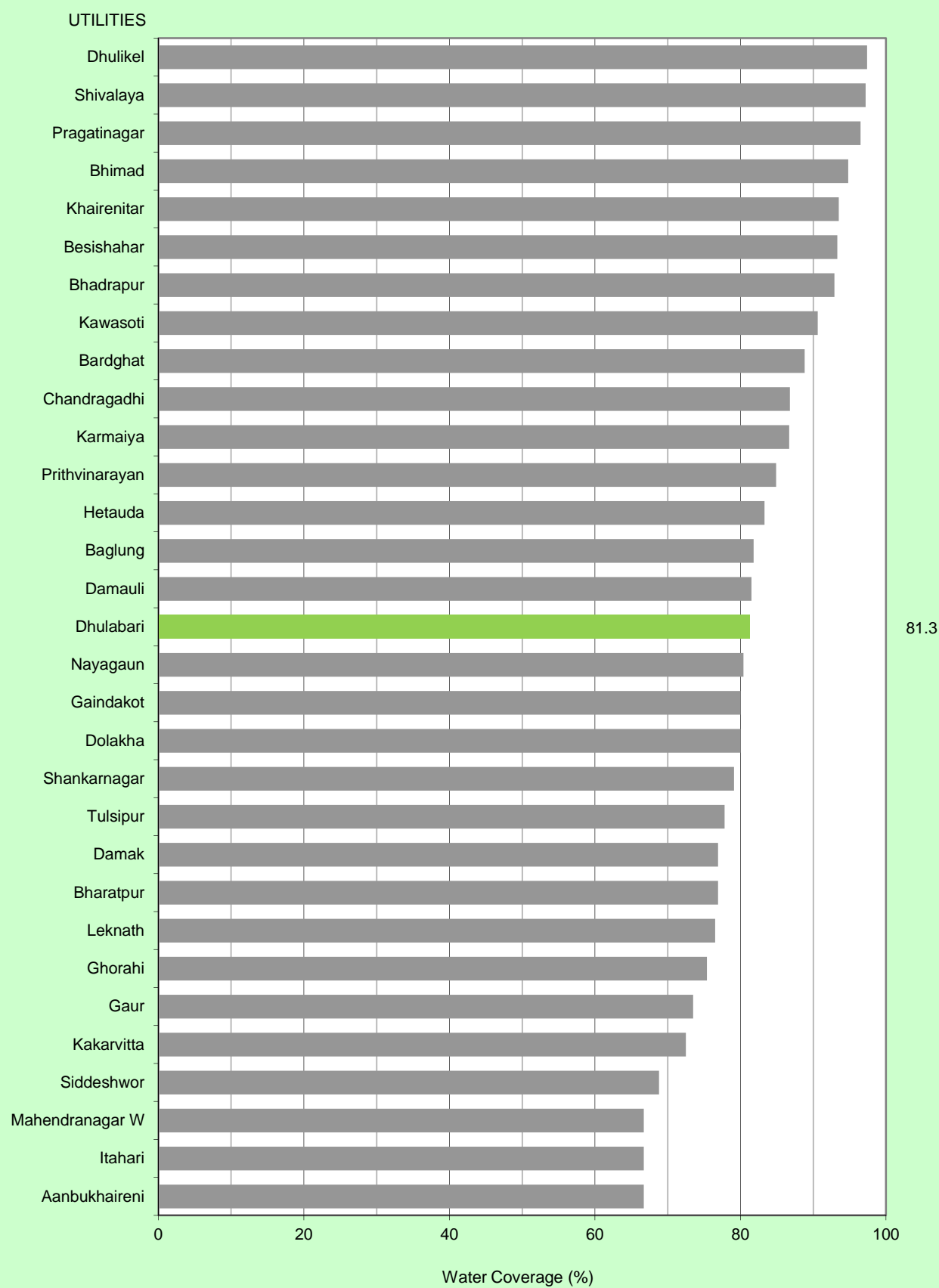


Figure 8b: Water Coverage

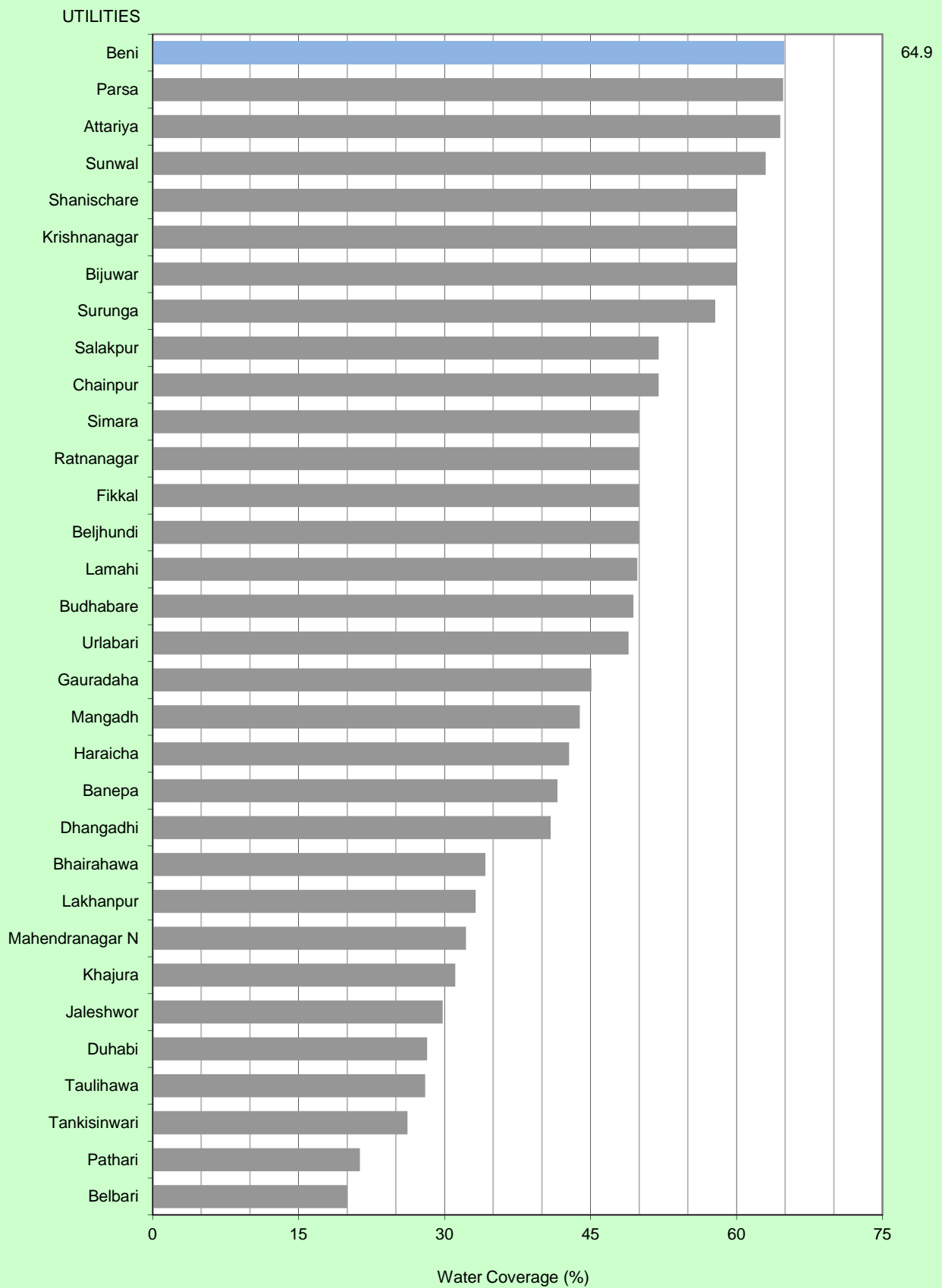


Figure 9a: Water Availability (Dry Months)

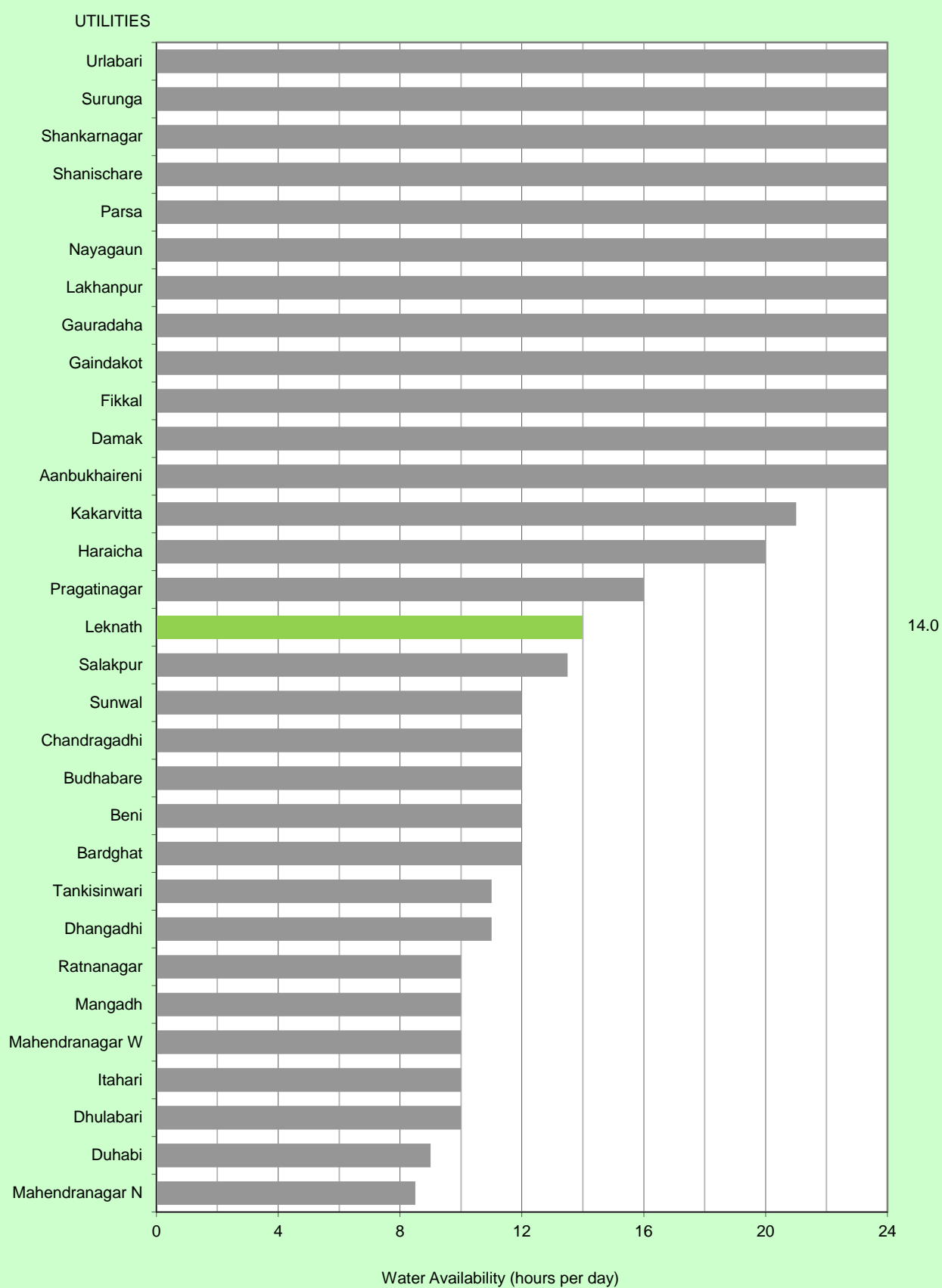


Figure 9b: Water Availability (Dry Months)



Figure 10a: Water Availability (Wet Months)

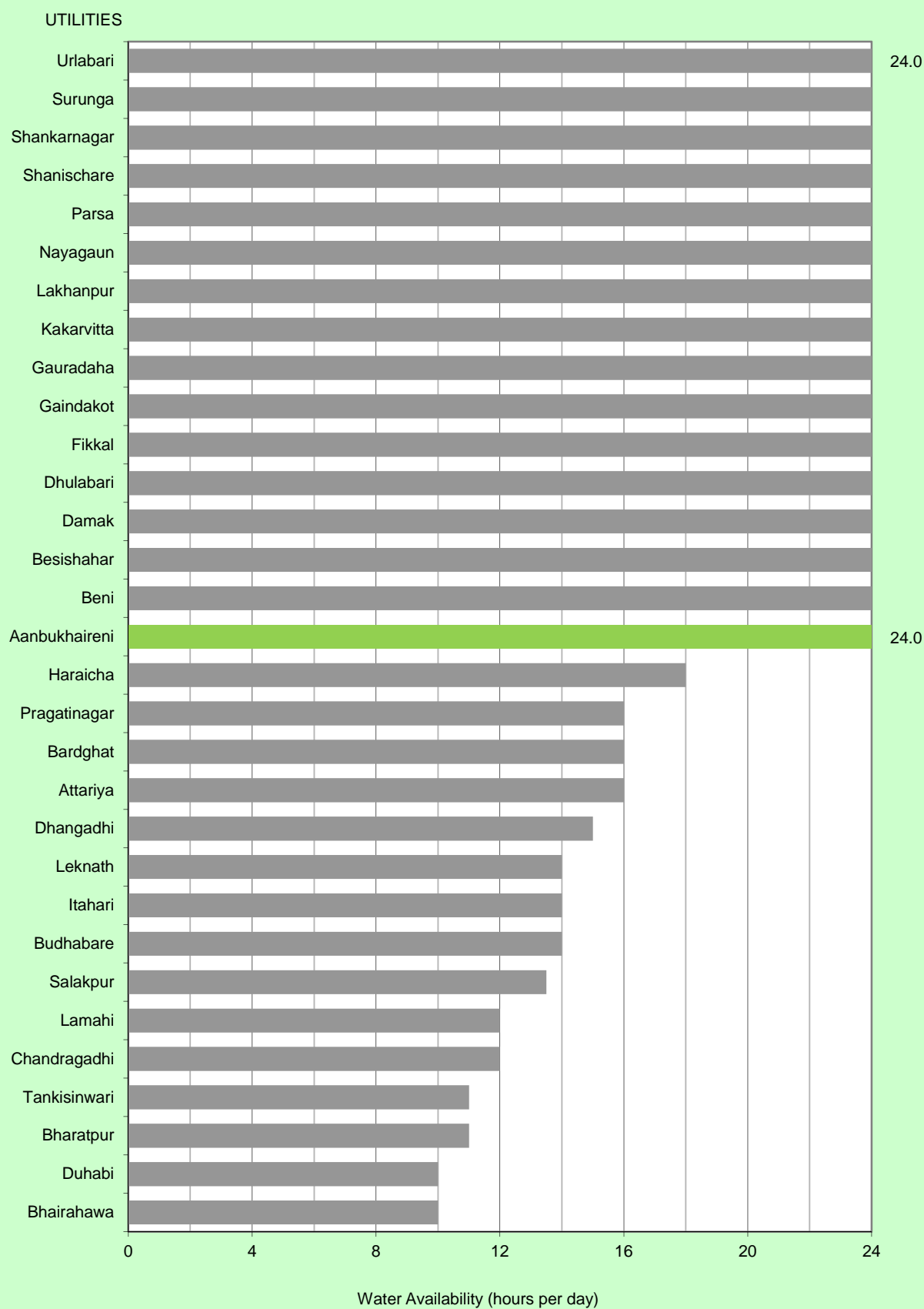


Figure 10b: Water Availability (Wet Months)

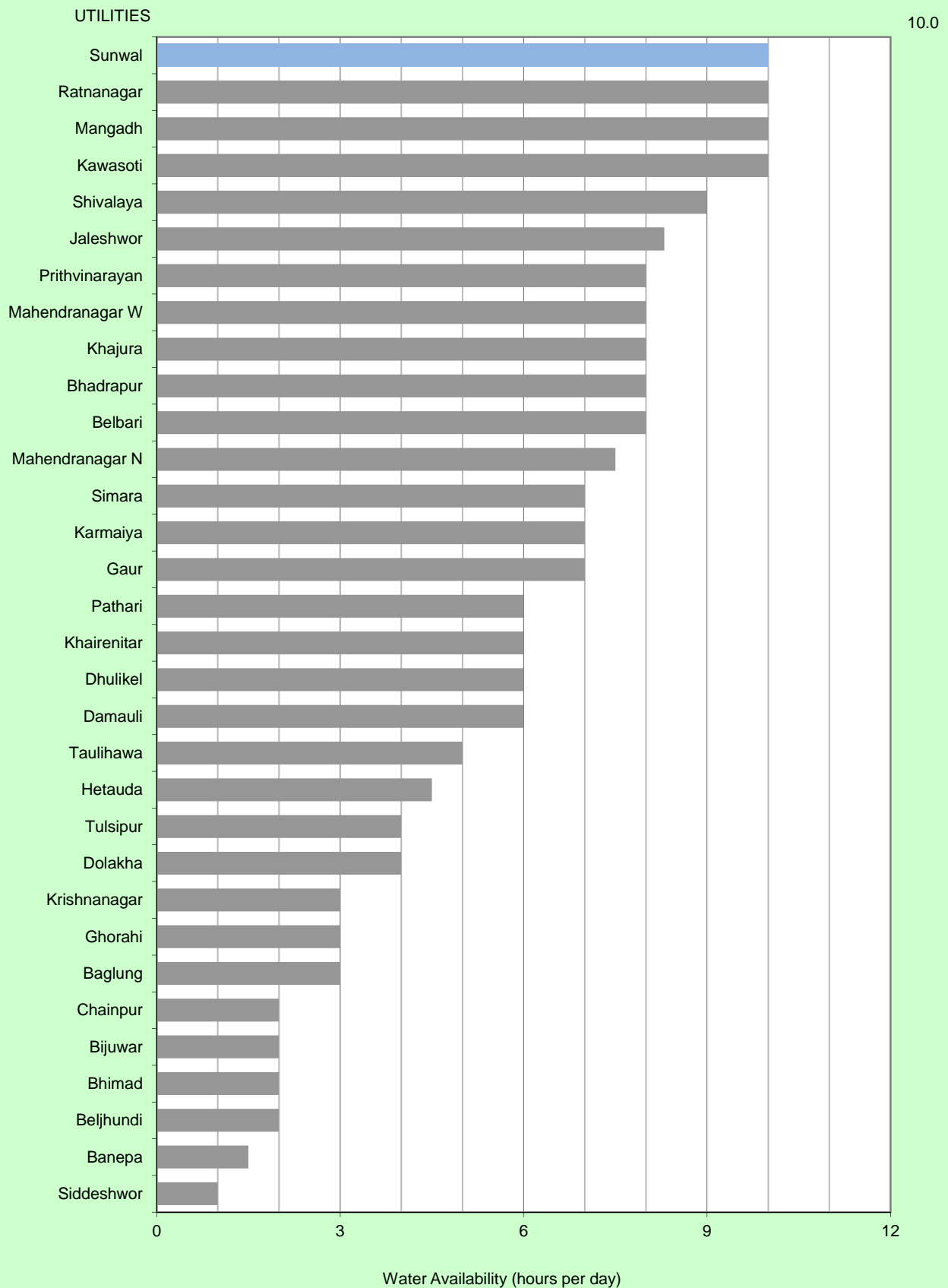


Figure 11a: Average Pressure at the Tap

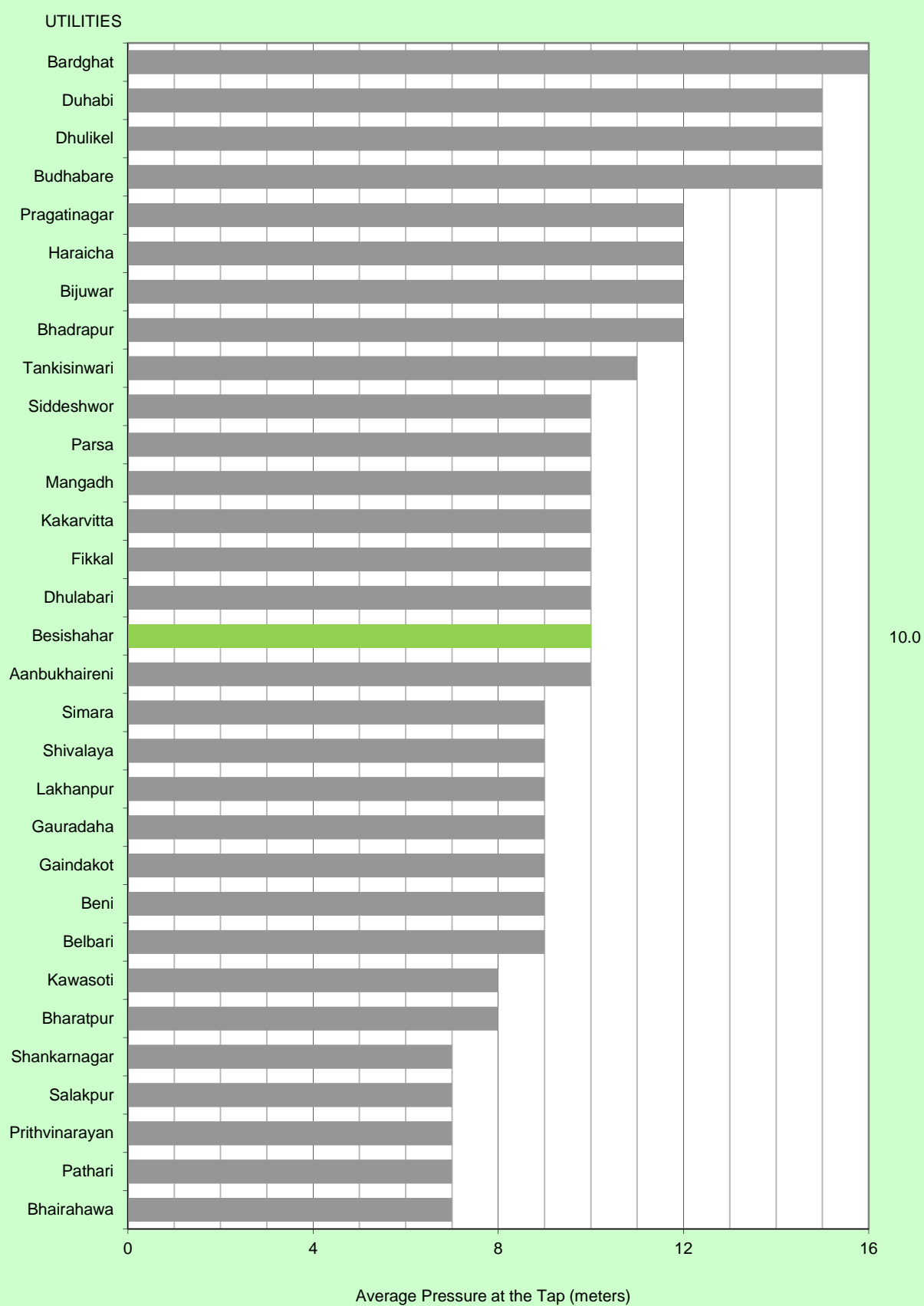


Figure 11b: Average Pressure at the Tap

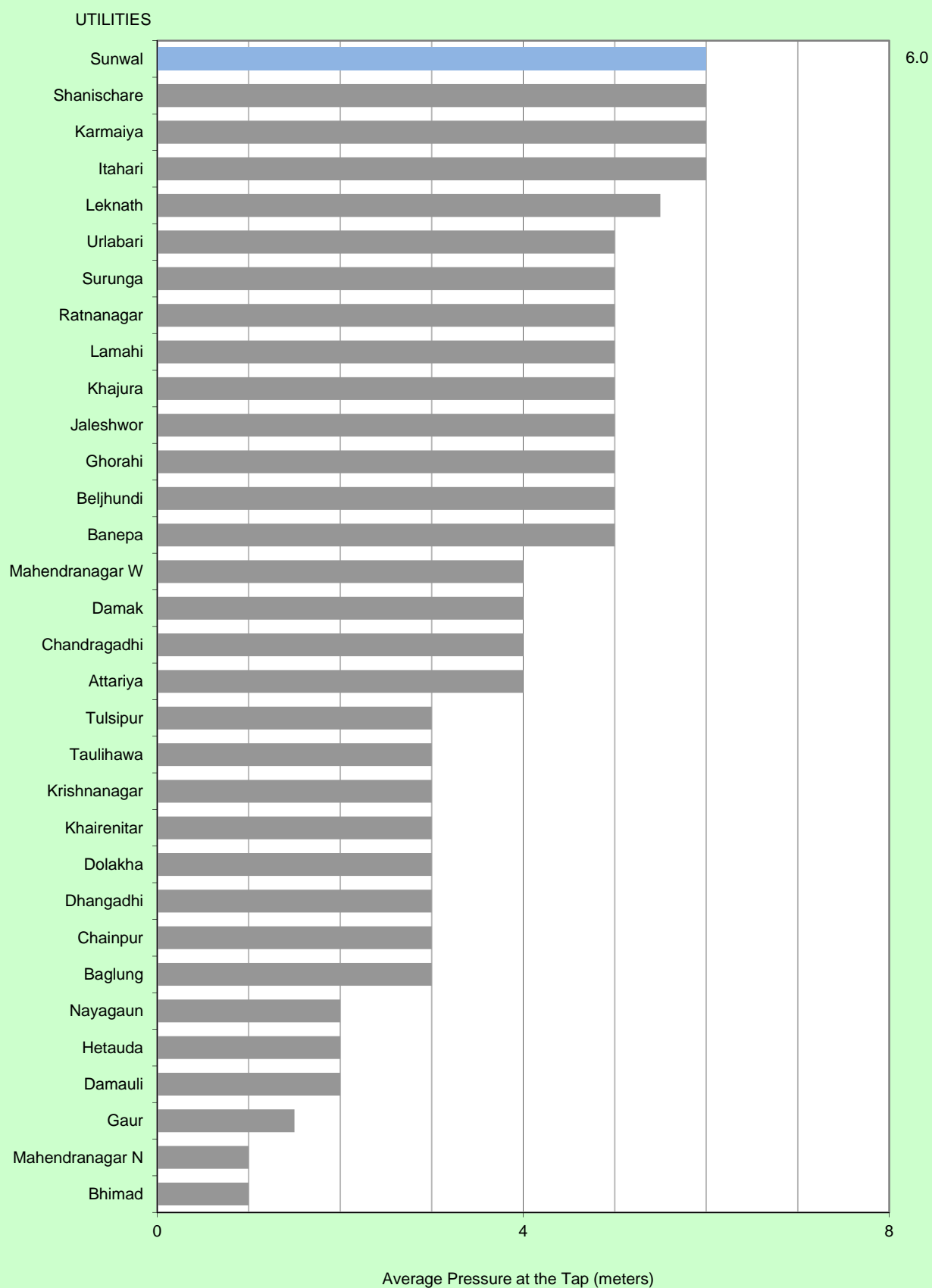


Figure 12a: Monthly Bill Per Connection

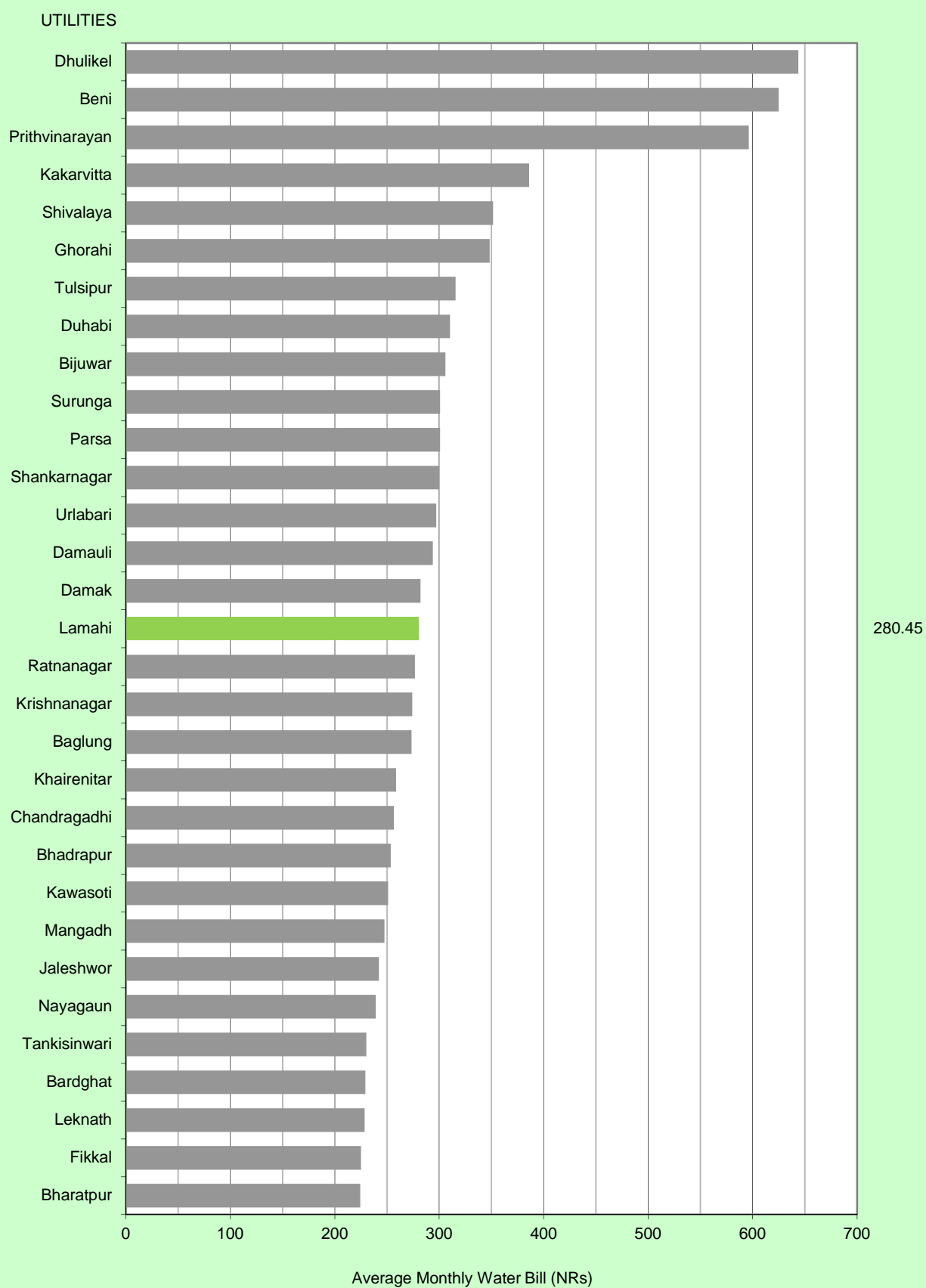


Figure 12b: Monthly Bill Per Connection

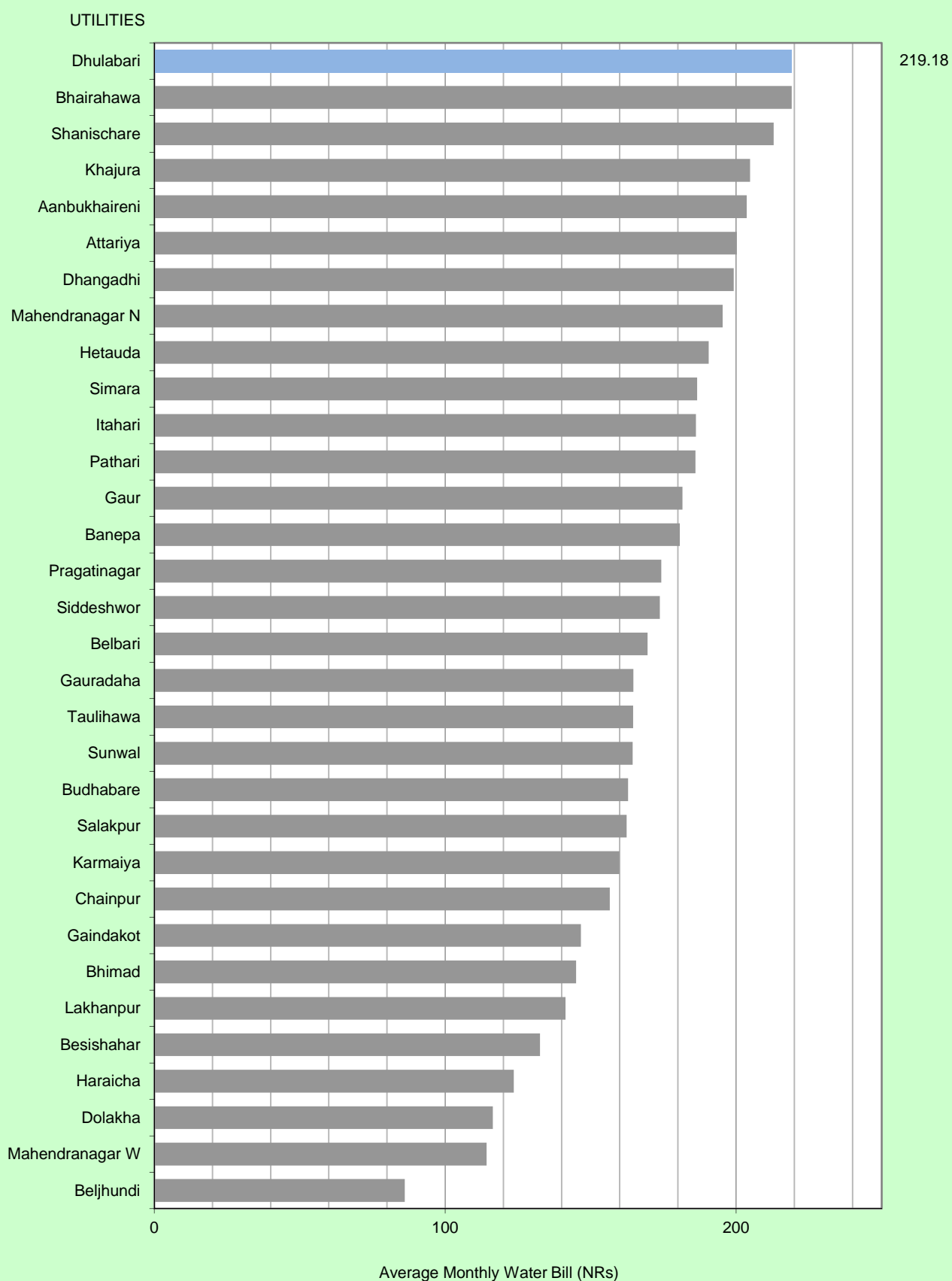


Figure 13a: Water Quality Sampling

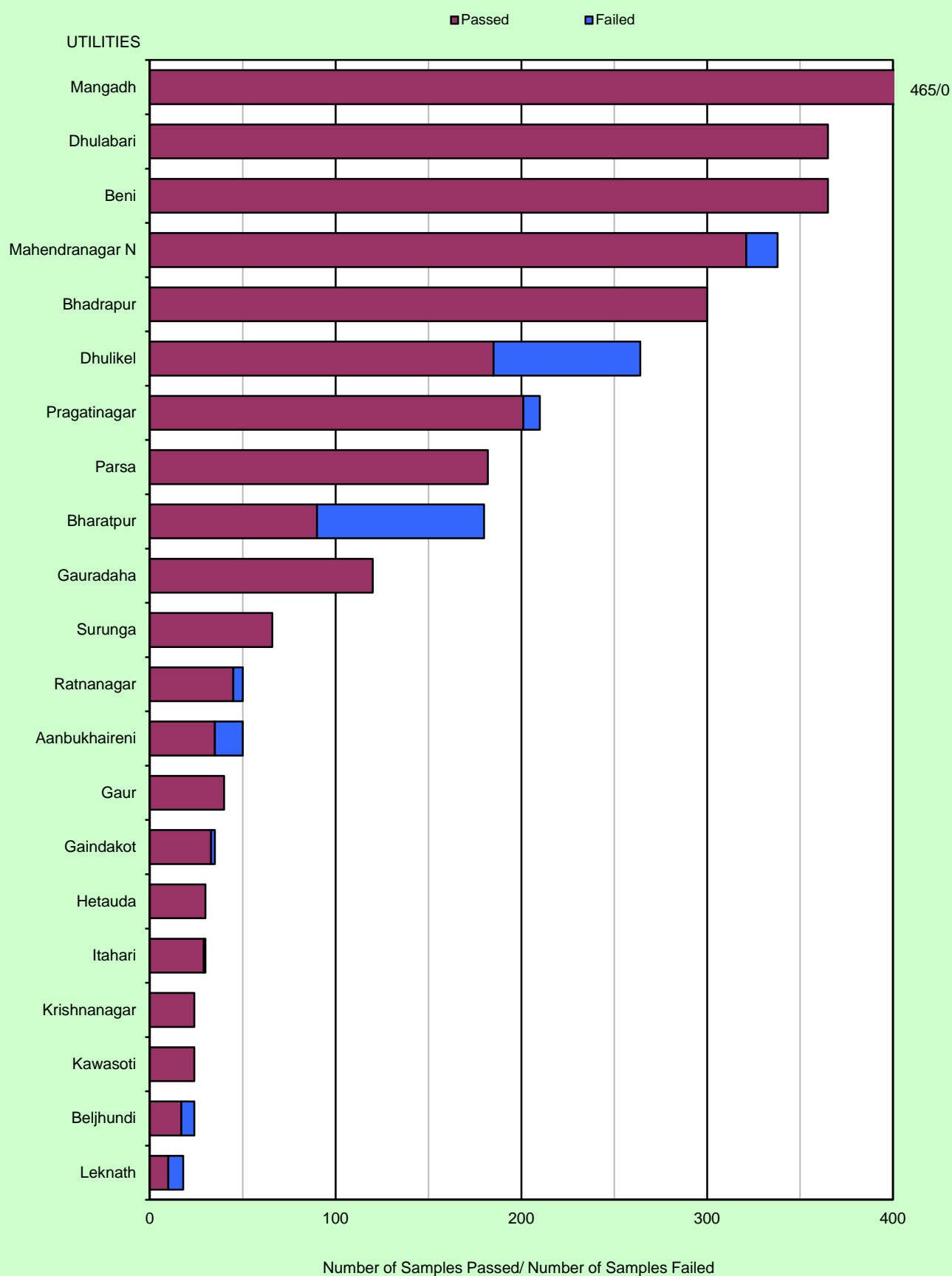
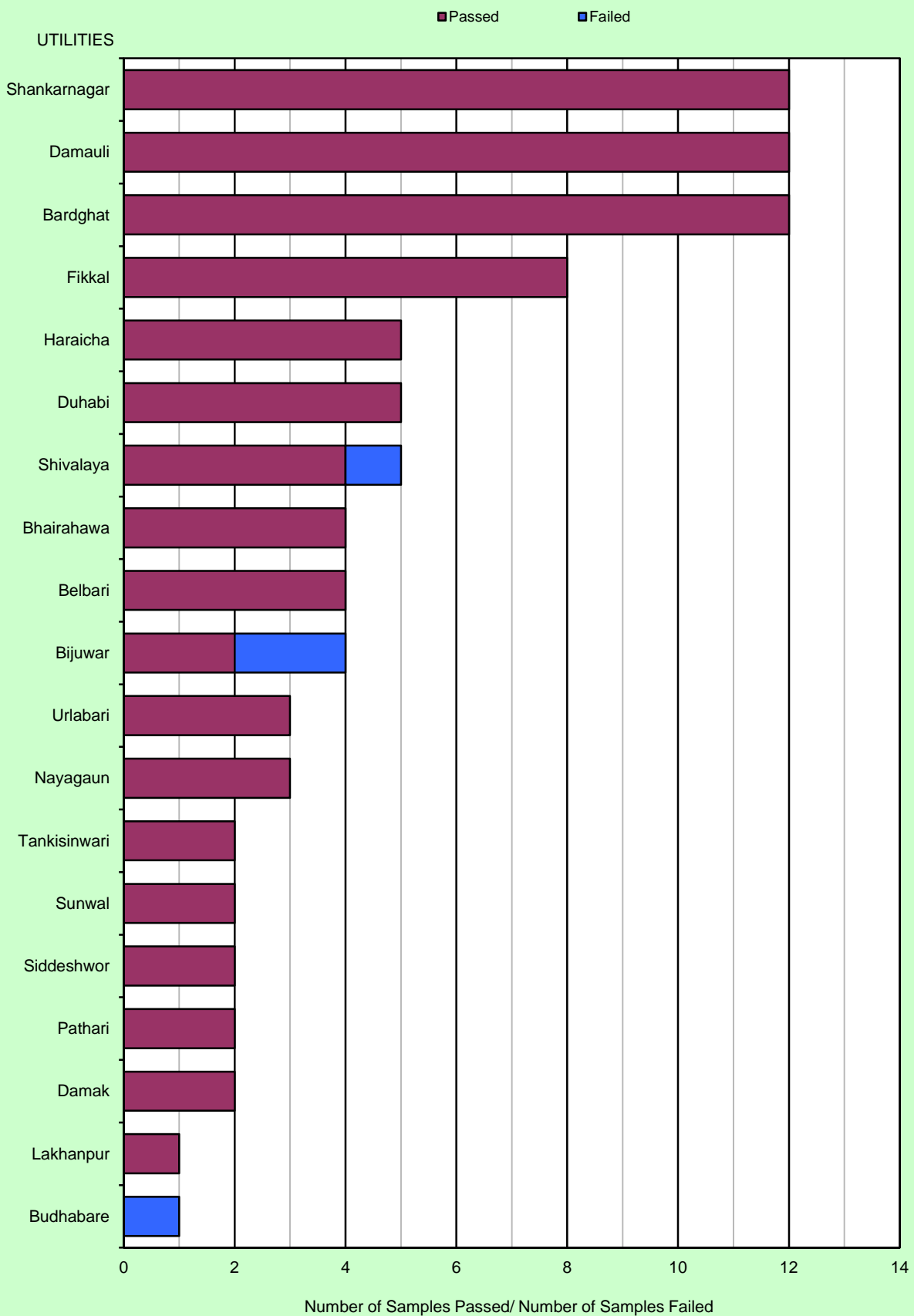


Figure 13b: Water Quality Sampling*



*** 23 water service providers did not test for residual chlorine.**

Figure 14a: Complaints Received

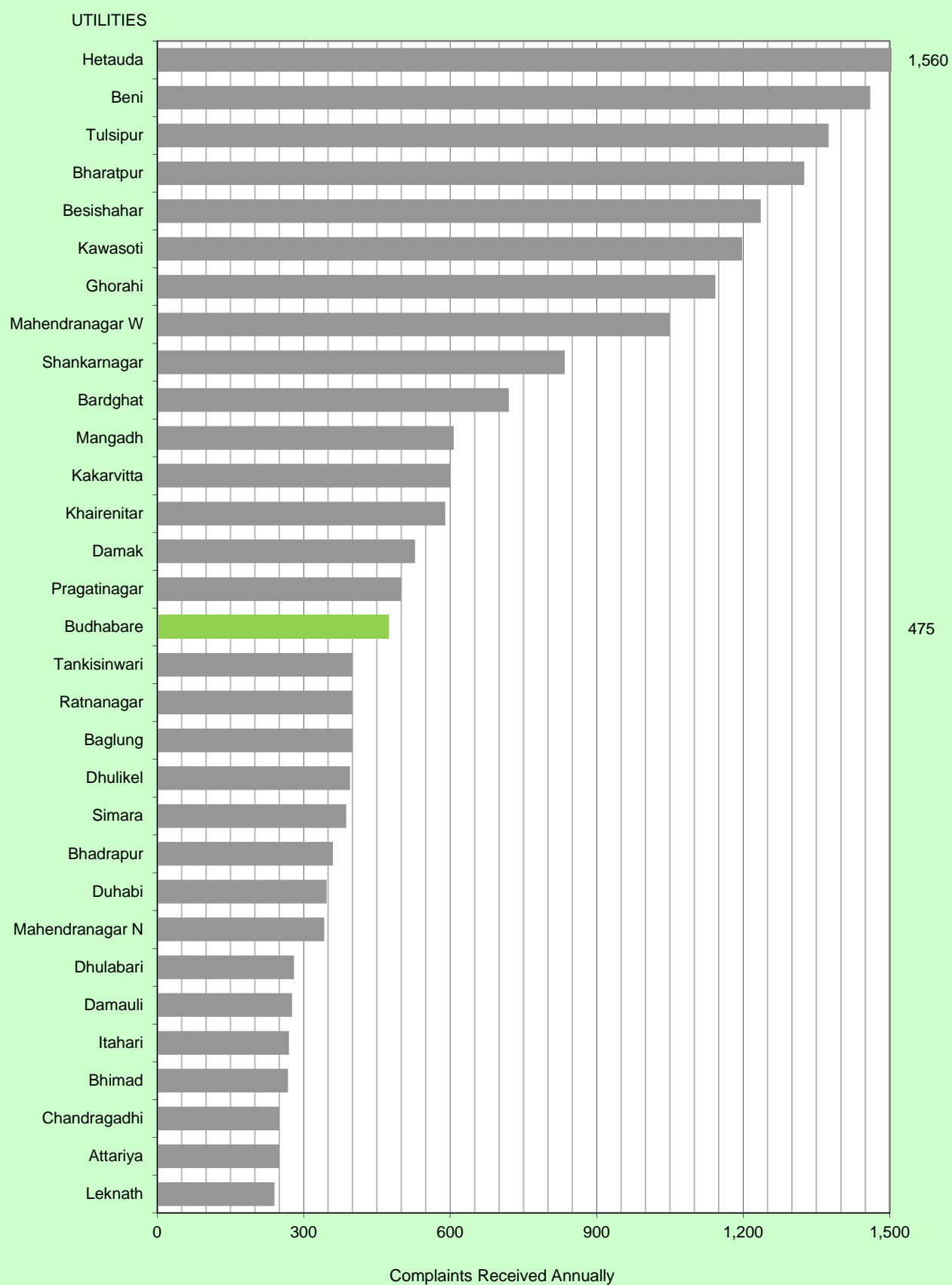


Figure 14b: Complaints Received



Figure 15a: Pipe Leaks Repaired

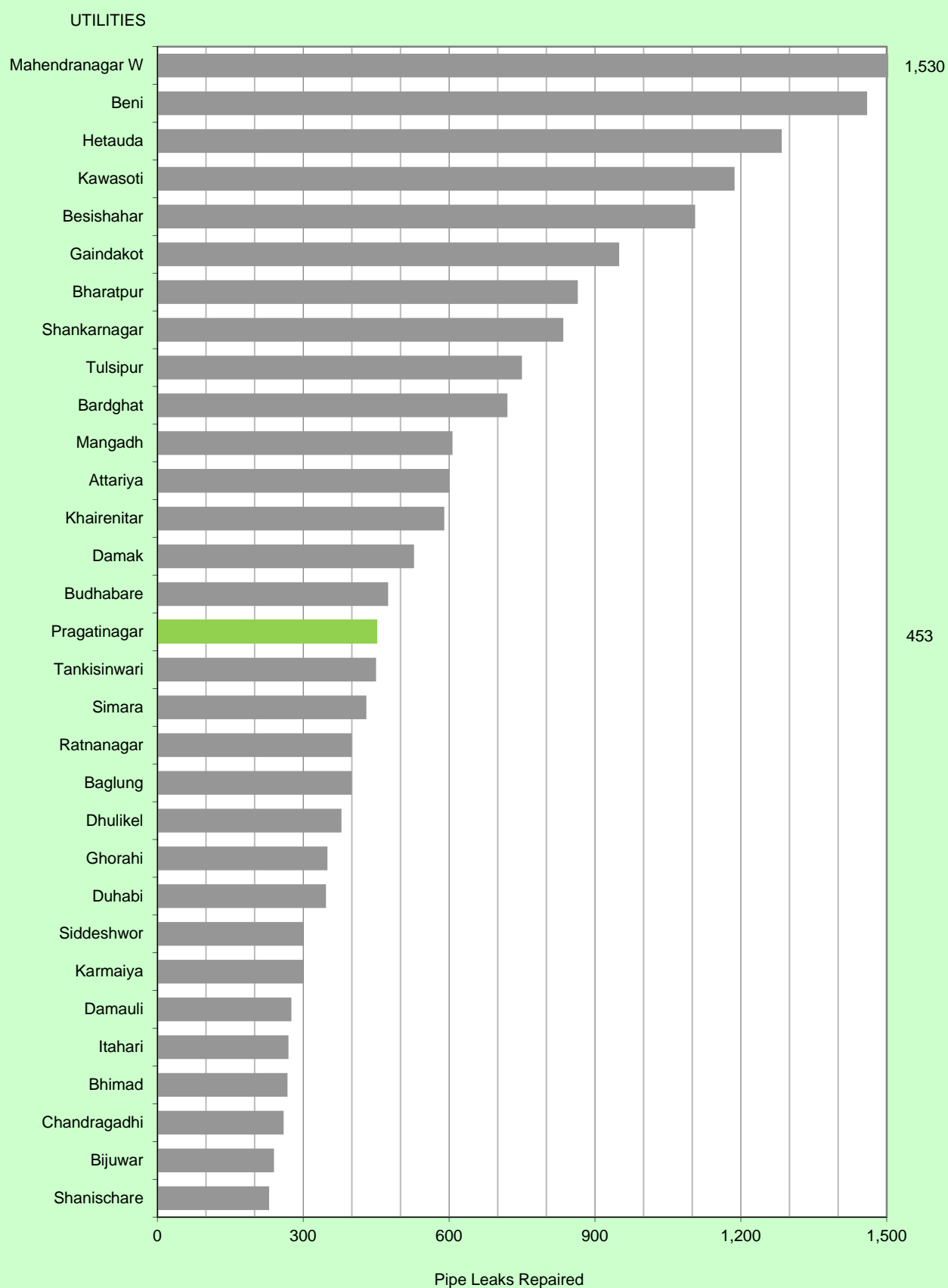


Figure 15b: Pipe Leaks Repaired

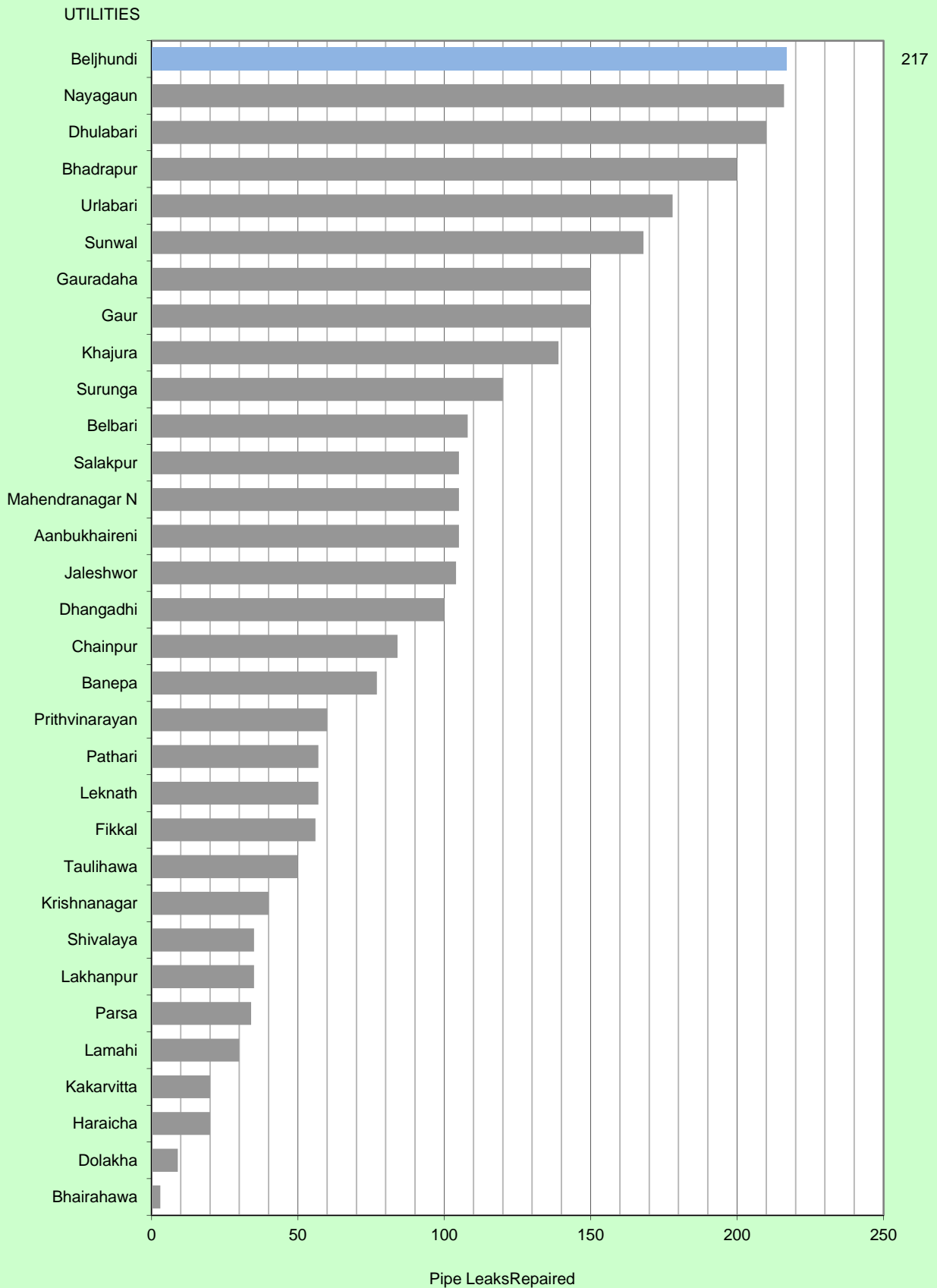


Figure 16a: Operating Ratio

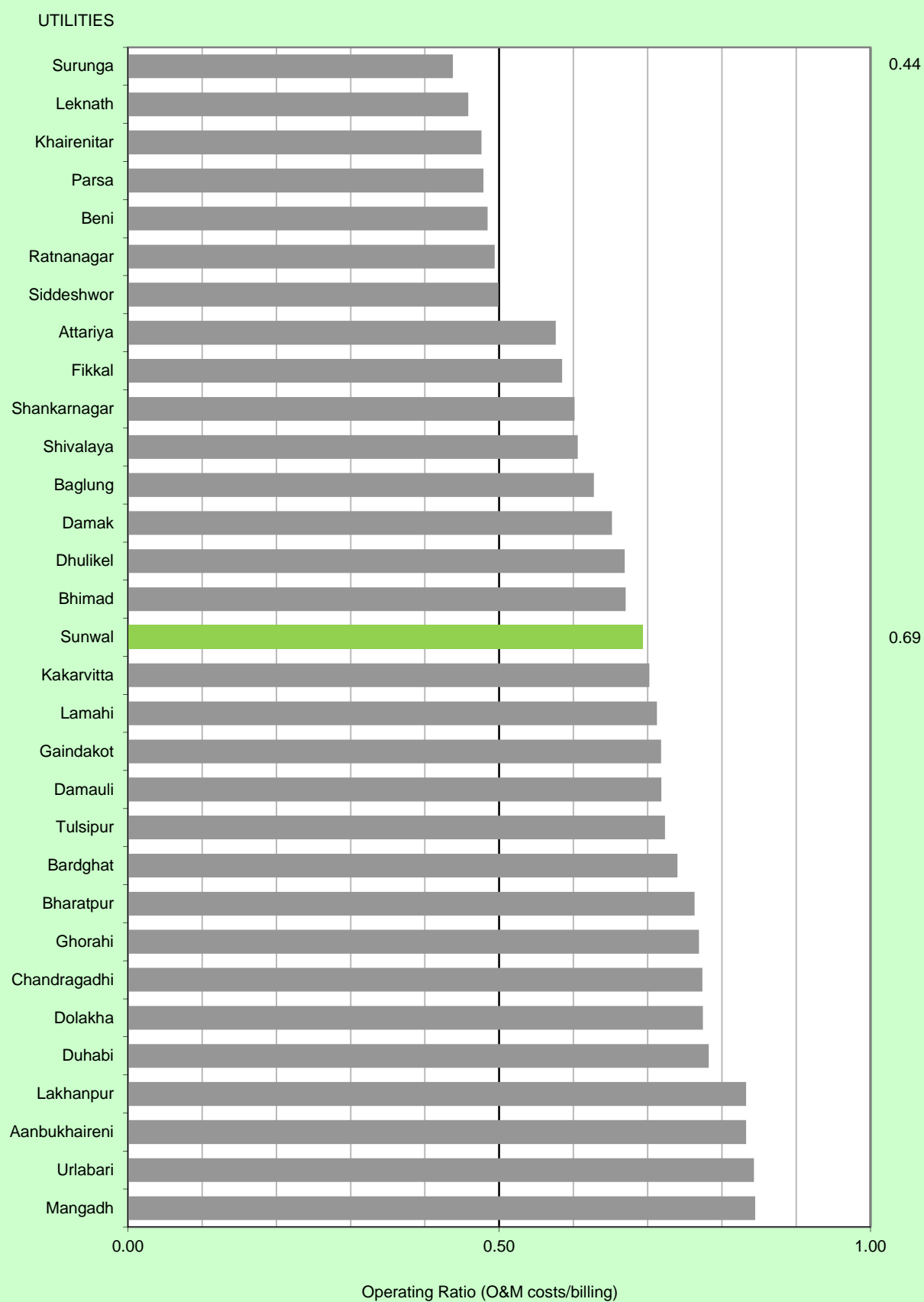


Figure 16b: Operating Ratio

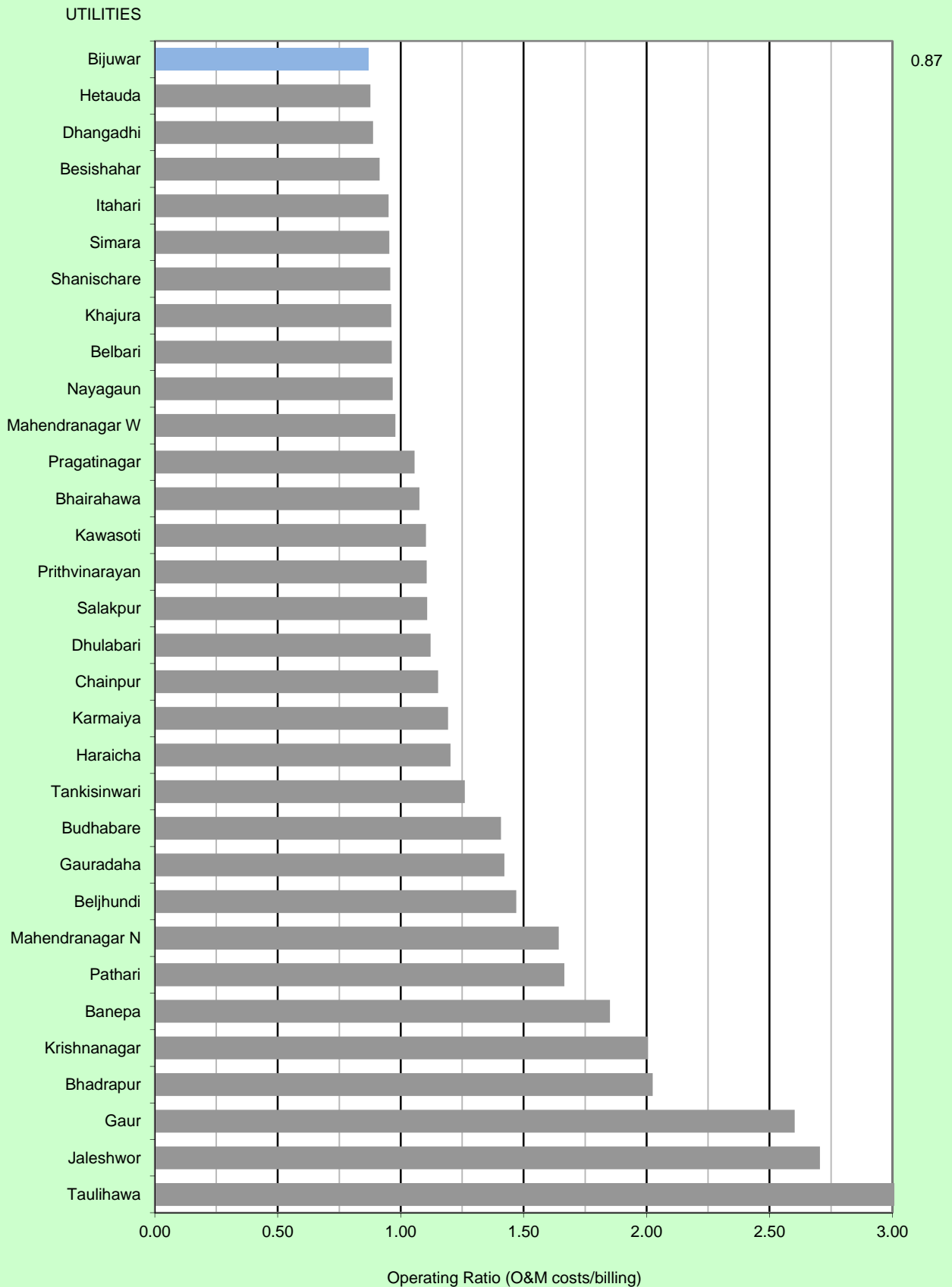


Figure 17a: Accounts Receivable

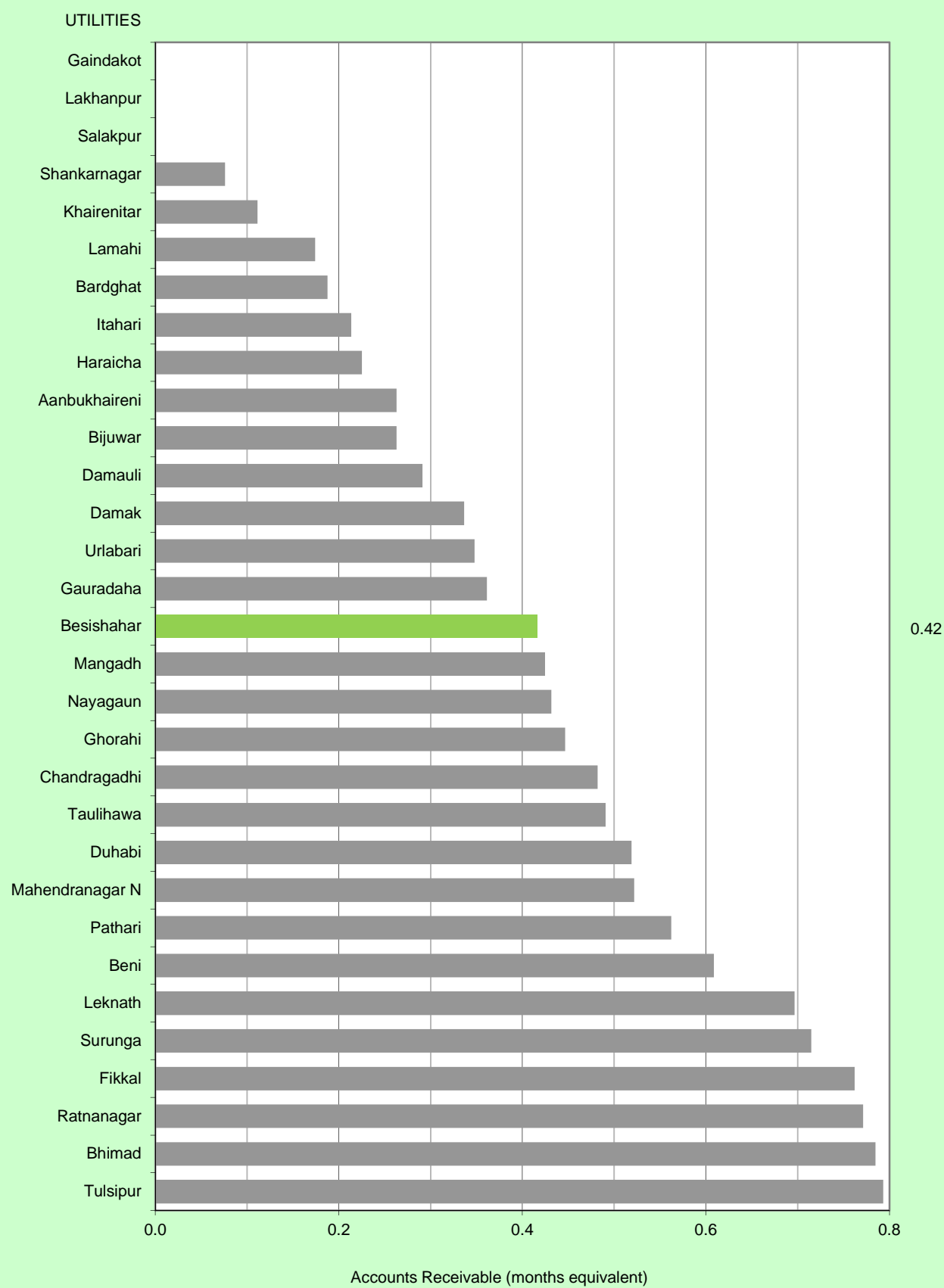


Figure 17b: Accounts Receivable

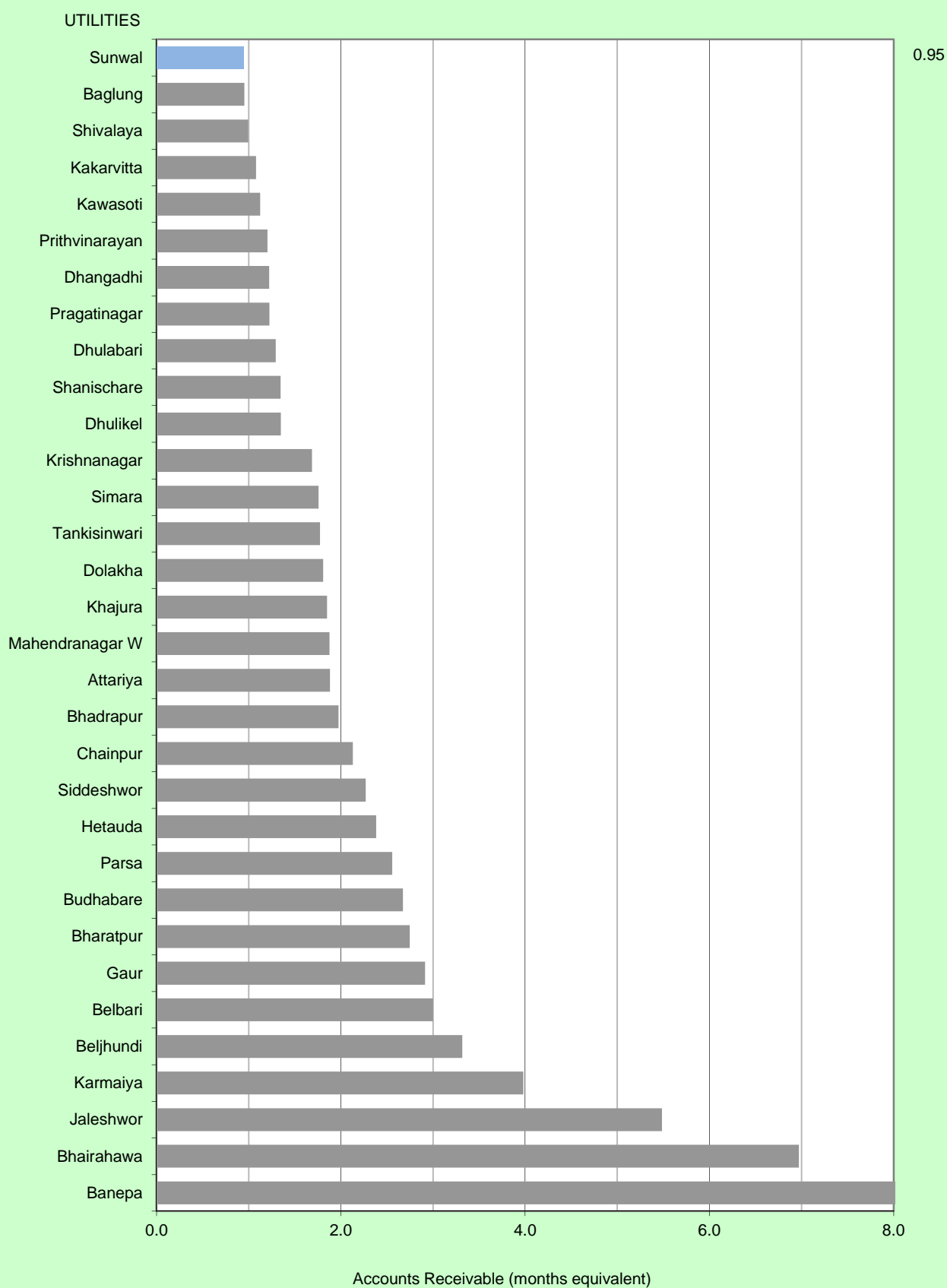


Figure 18a: Revenue Collection Efficiency

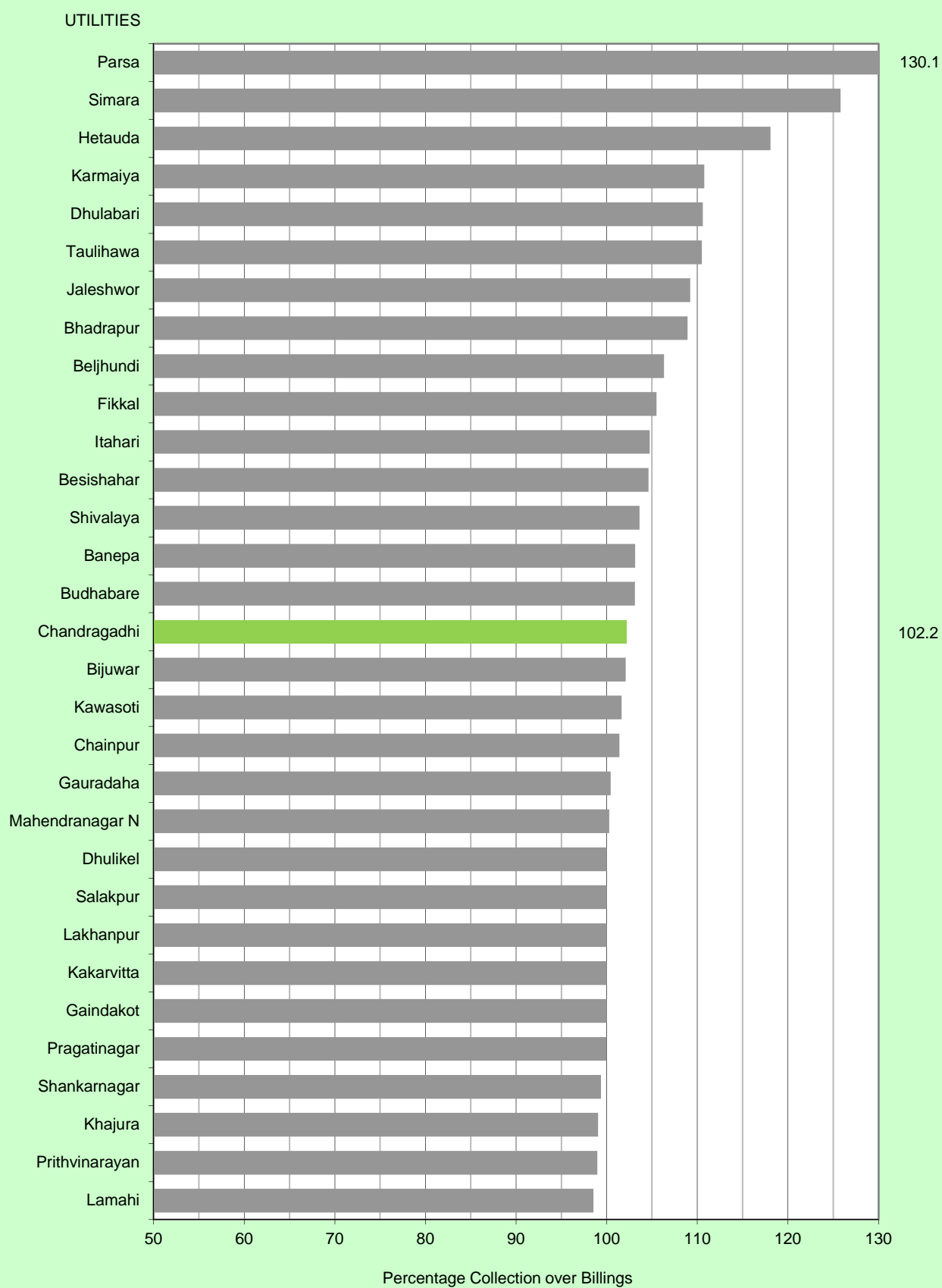


Figure 18b: Revenue Collection Efficiency

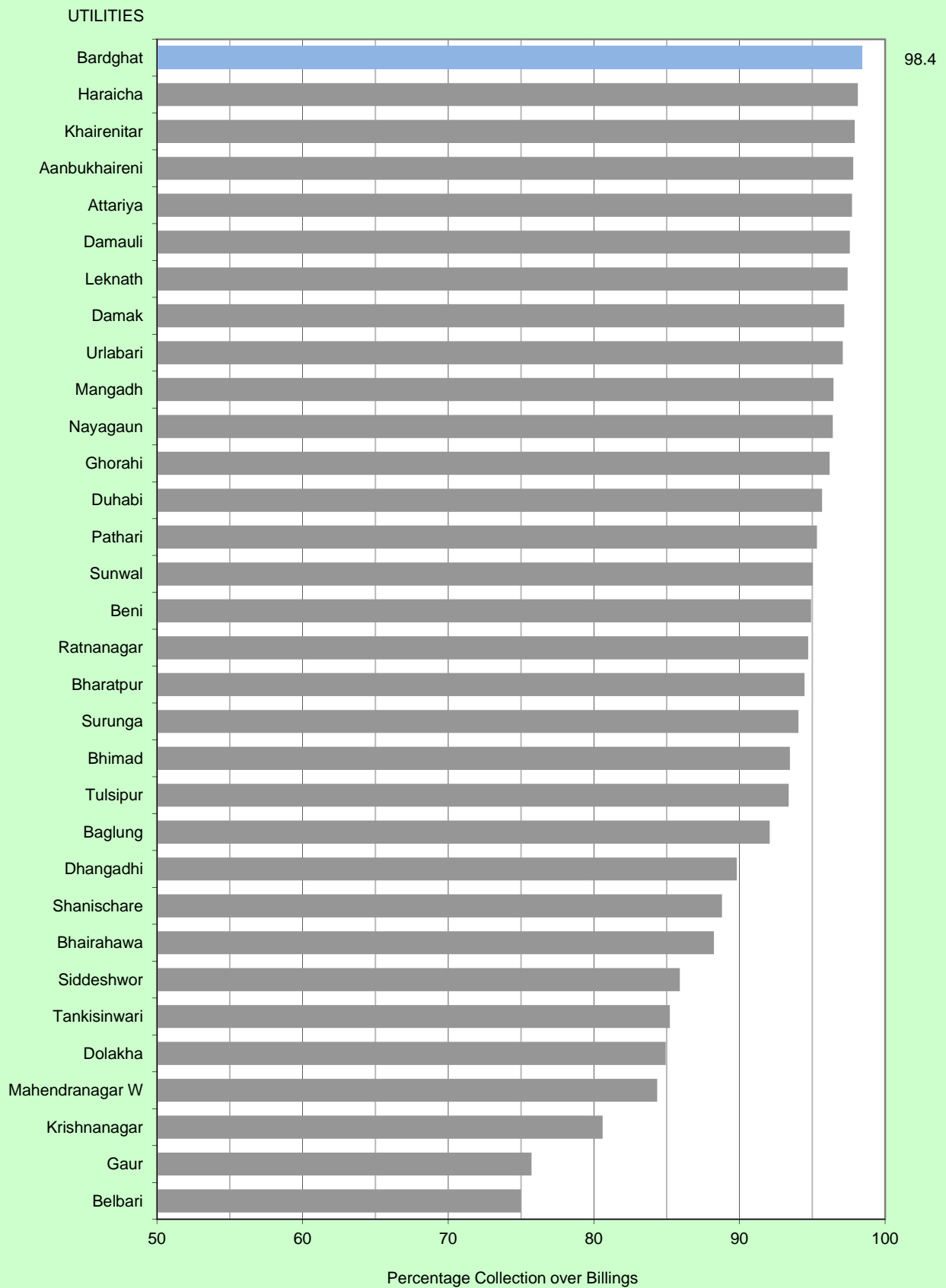


Figure 19a: Staff Per 1,000 Connections

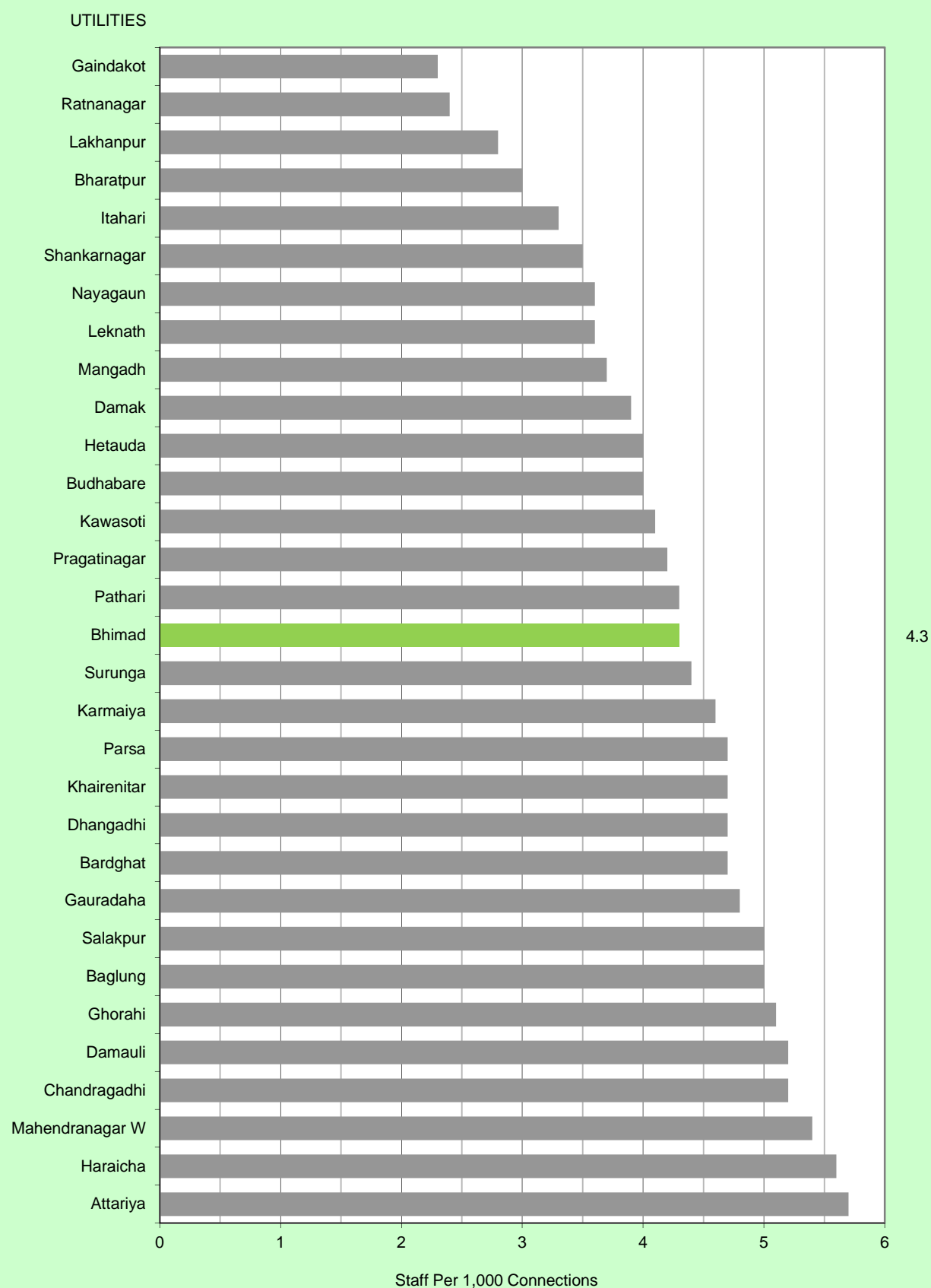


Figure 19b: Staff Per 1,000 Connections

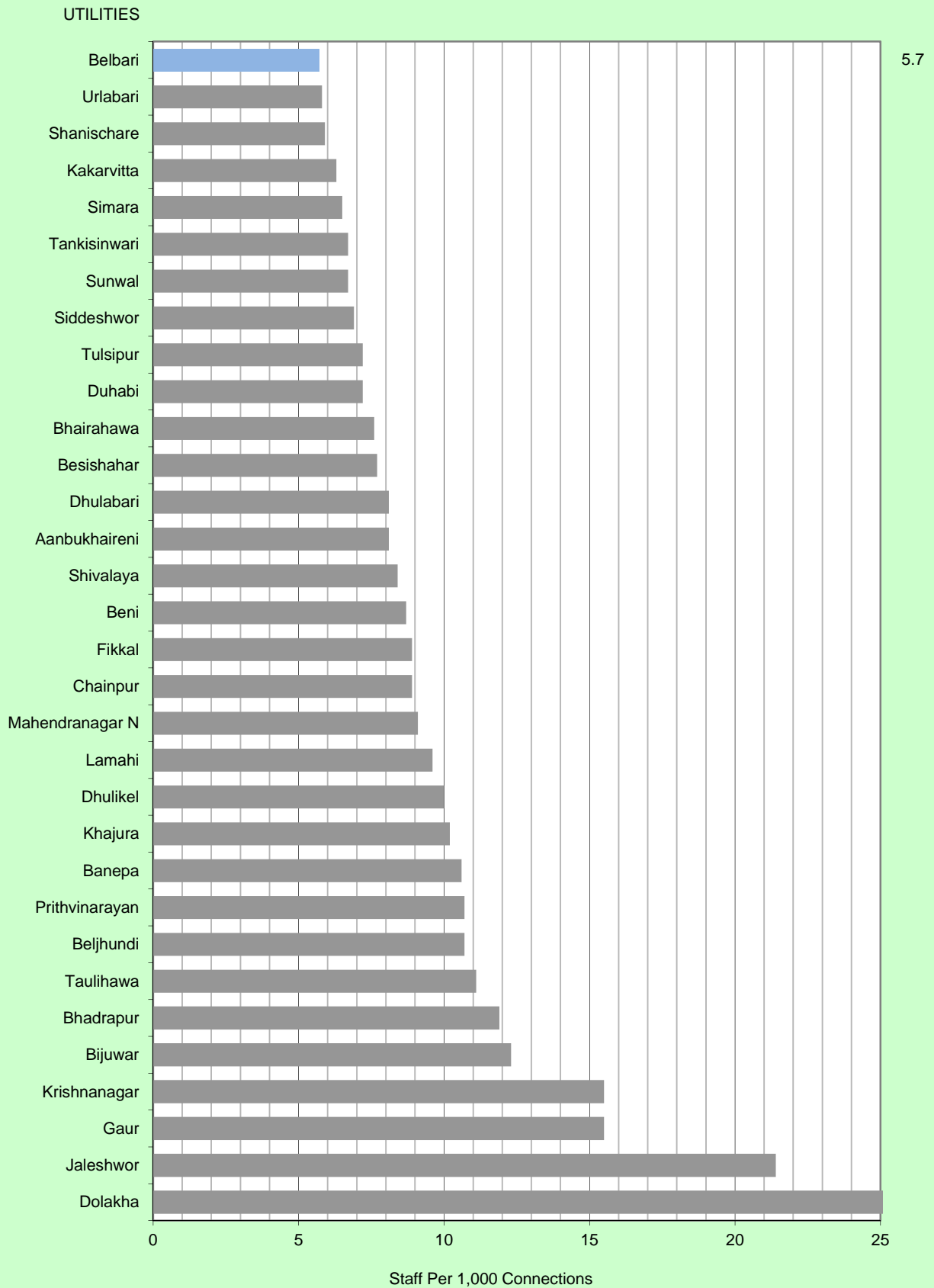


Figure 20a: Average Tariff

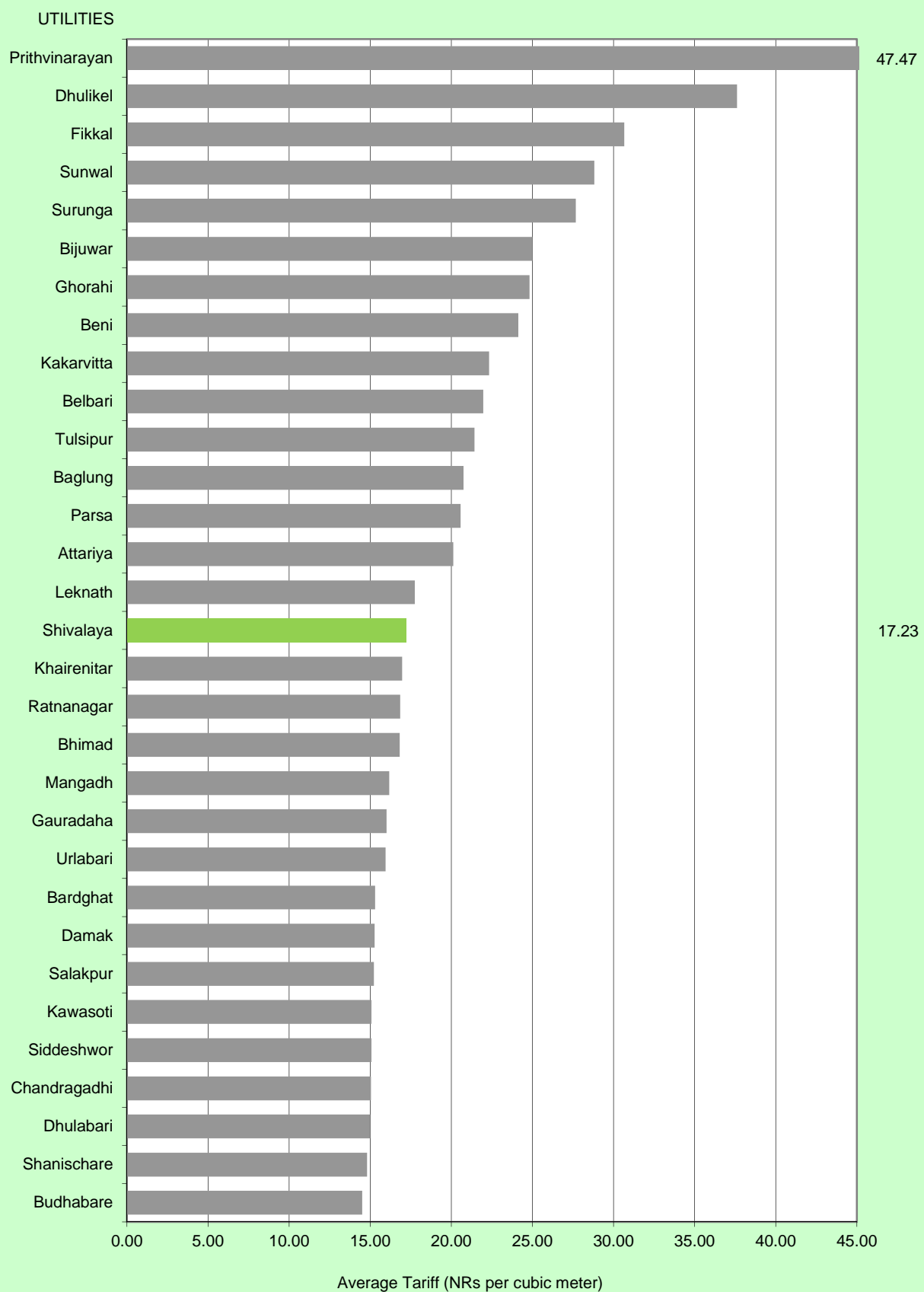


Figure 20b: Average Tariff

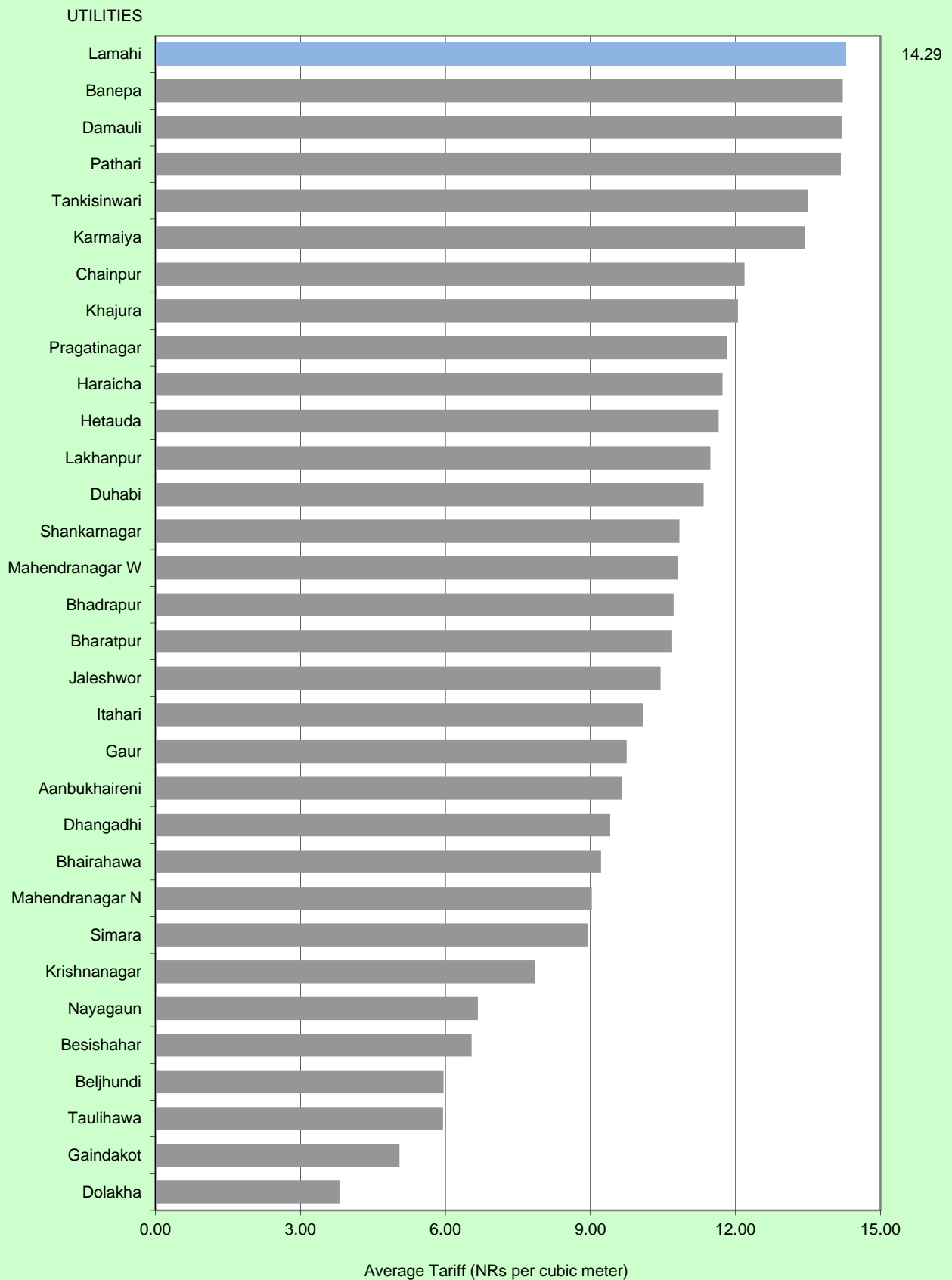


Figure 21a: DOMESTIC TARIFF STRUCTURES

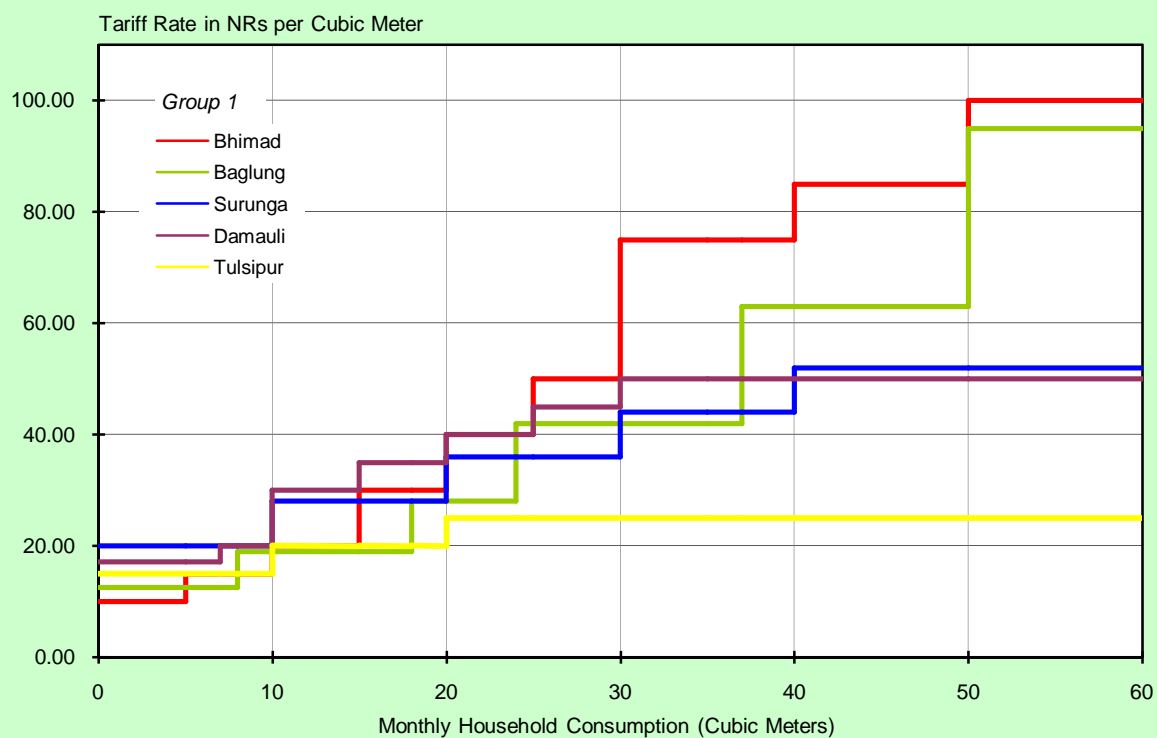
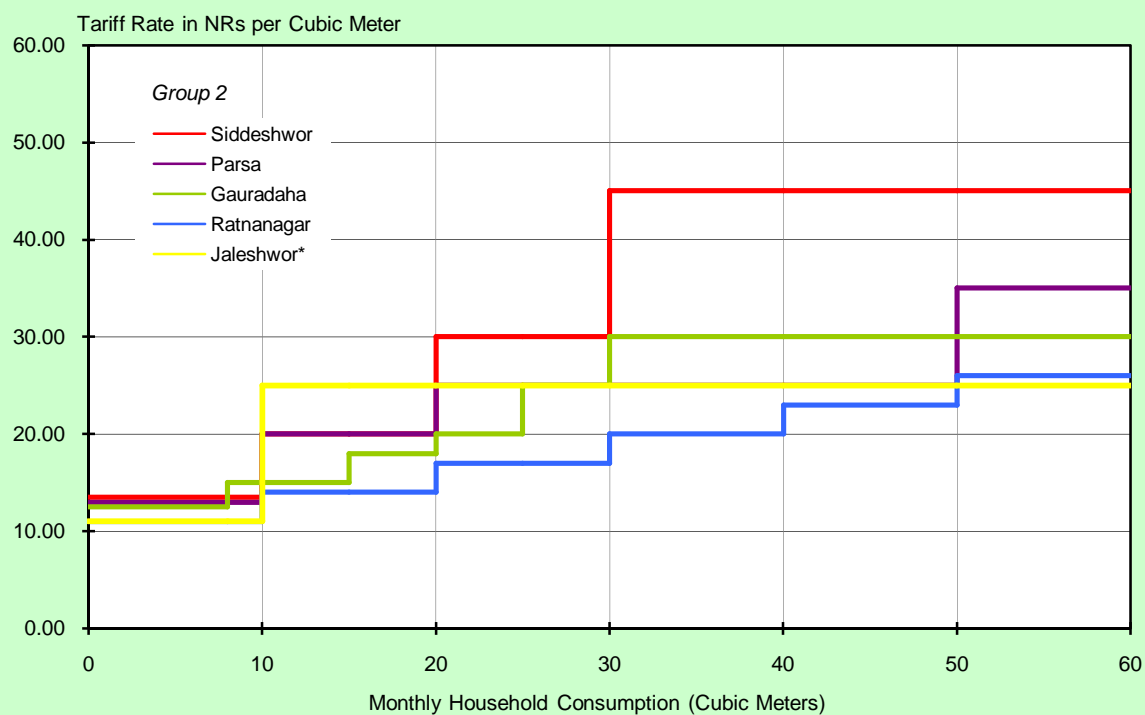


Figure 21b: DOMESTIC TARIFF STRUCTURES



* Same for Banepa, Bhairahawa, Dhangadhi, Gaur and Mahendranagar NWSC Branches.

Figure 21c: DOMESTIC TARIFF STRUCTURES

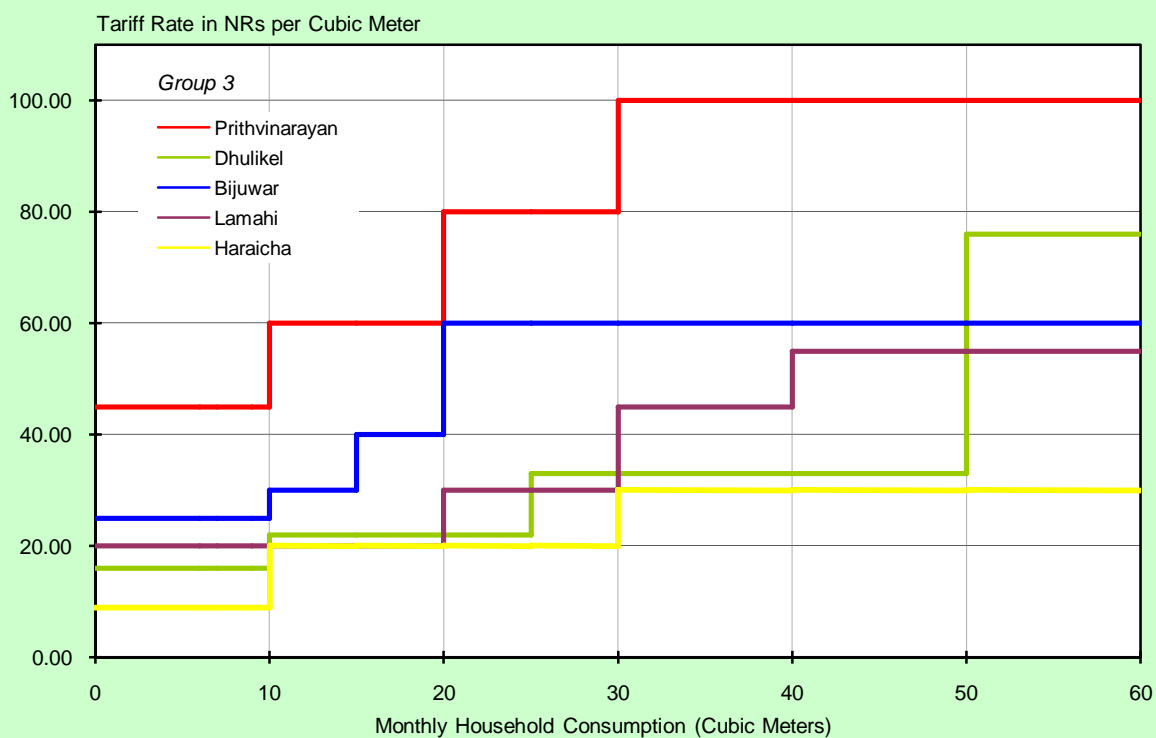


Figure 21d: DOMESTIC TARIFF STRUCTURES

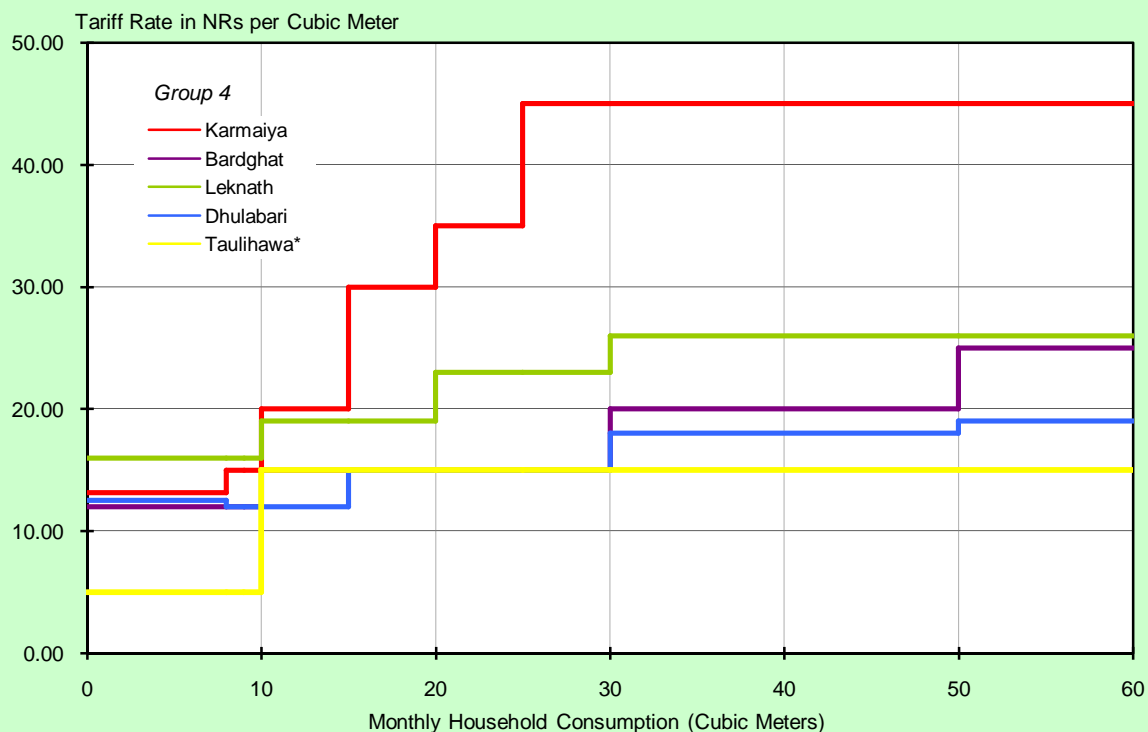


Figure 21e: DOMESTIC TARIFF STRUCTURES

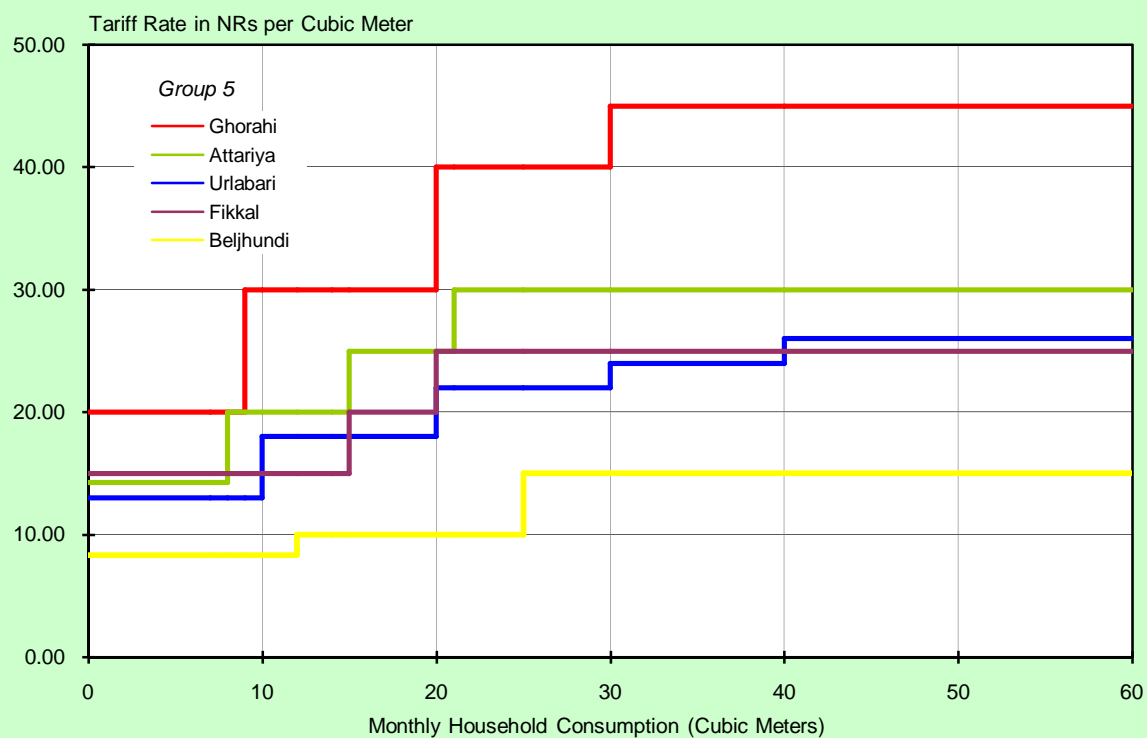


Figure 21f: DOMESTIC TARIFF STRUCTURES

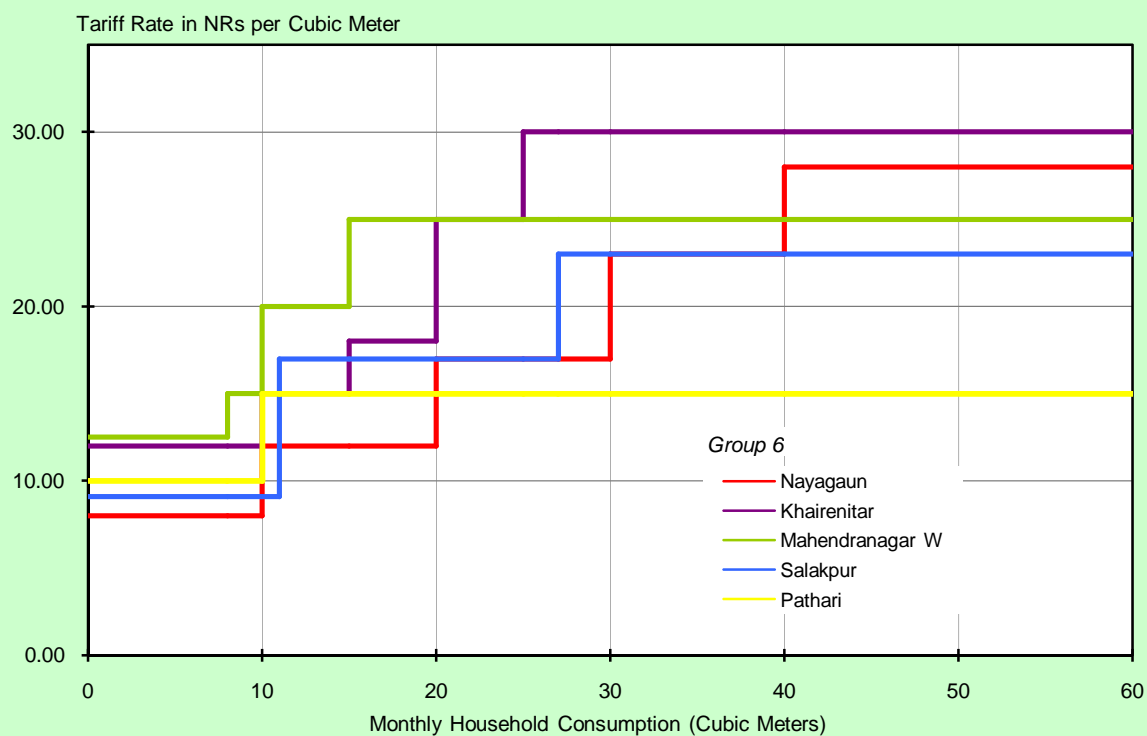


Figure 21g: DOMESTIC TARIFF STRUCTURES

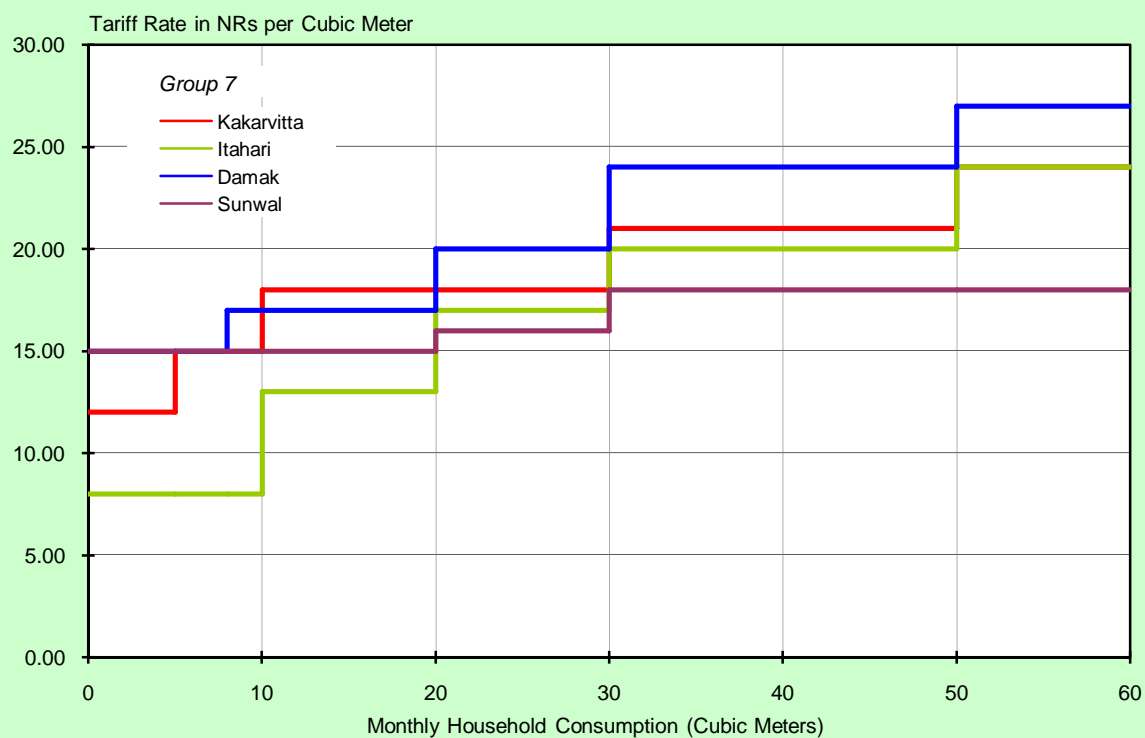


Figure 21h: DOMESTIC TARIFF STRUCTURES

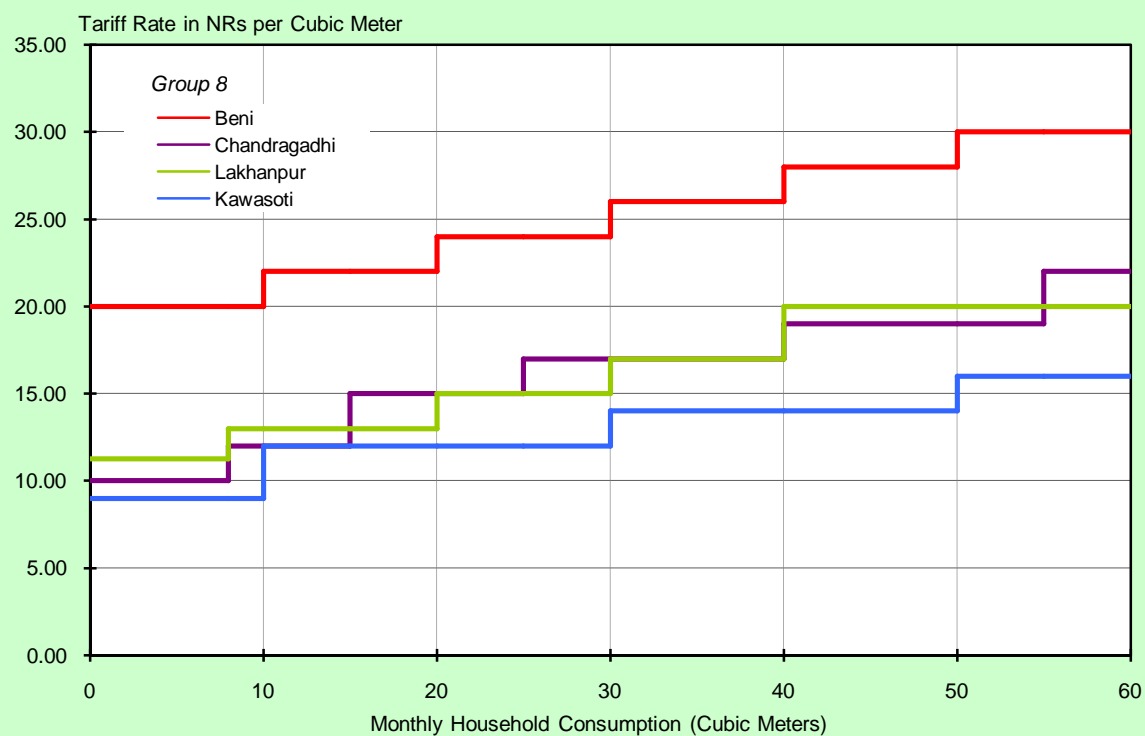


Figure 21i: DOMESTIC TARIFF STRUCTURES

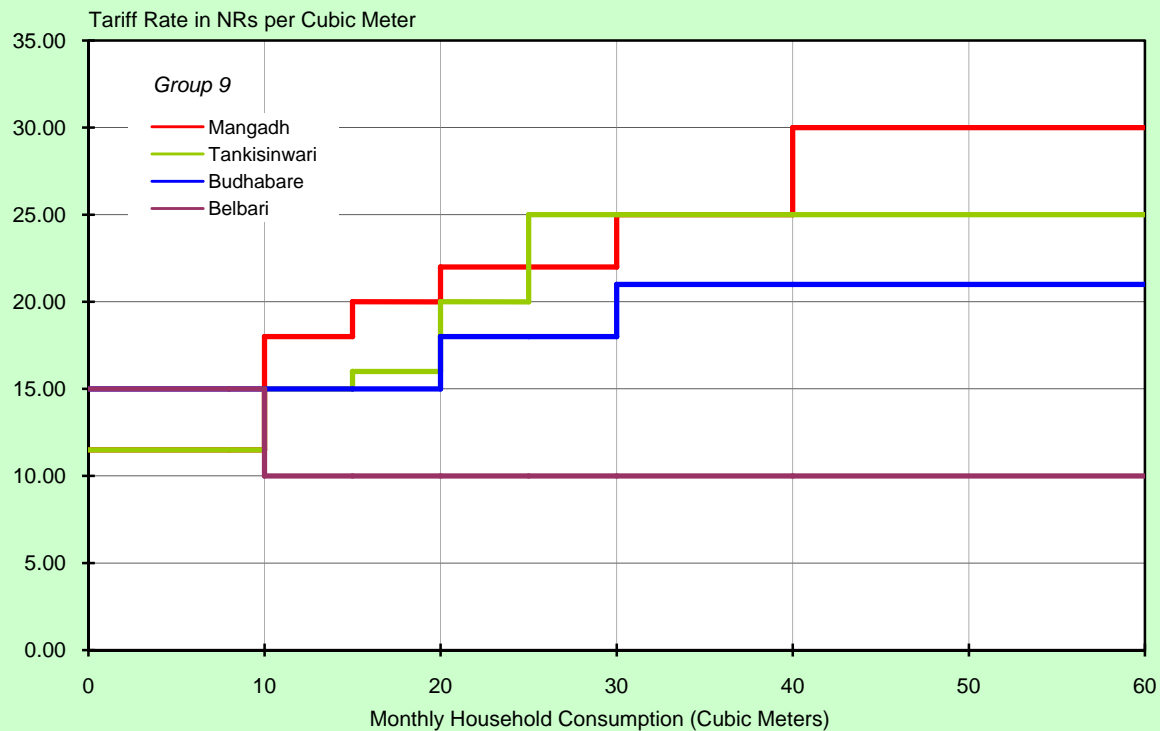


Figure 21j: DOMESTIC TARIFF STRUCTURES

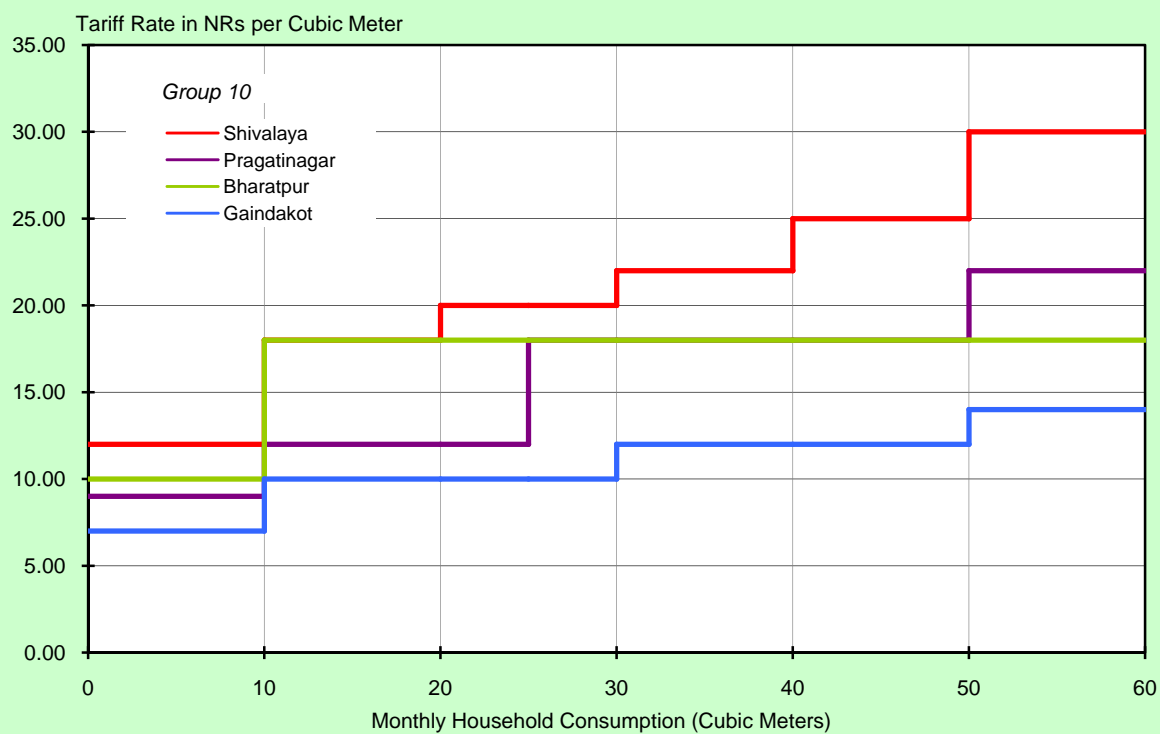


Figure 21k: DOMESTIC TARIFF STRUCTURES

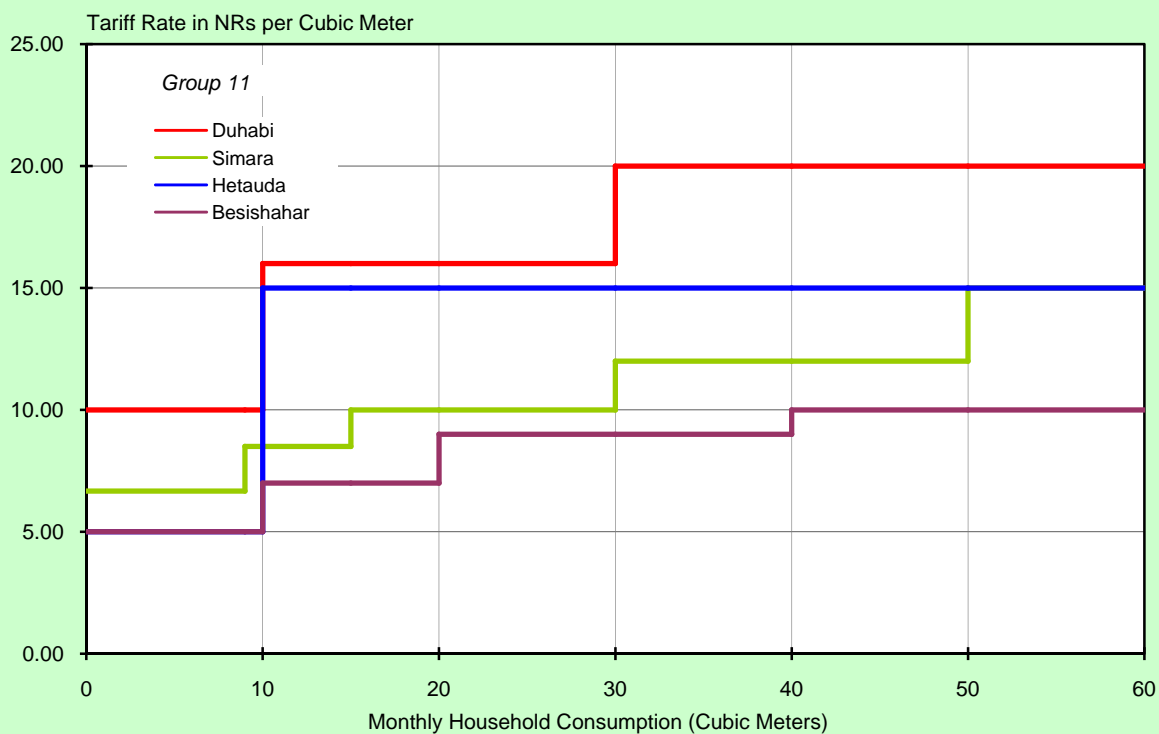


Figure 21l: DOMESTIC TARIFF STRUCTURES

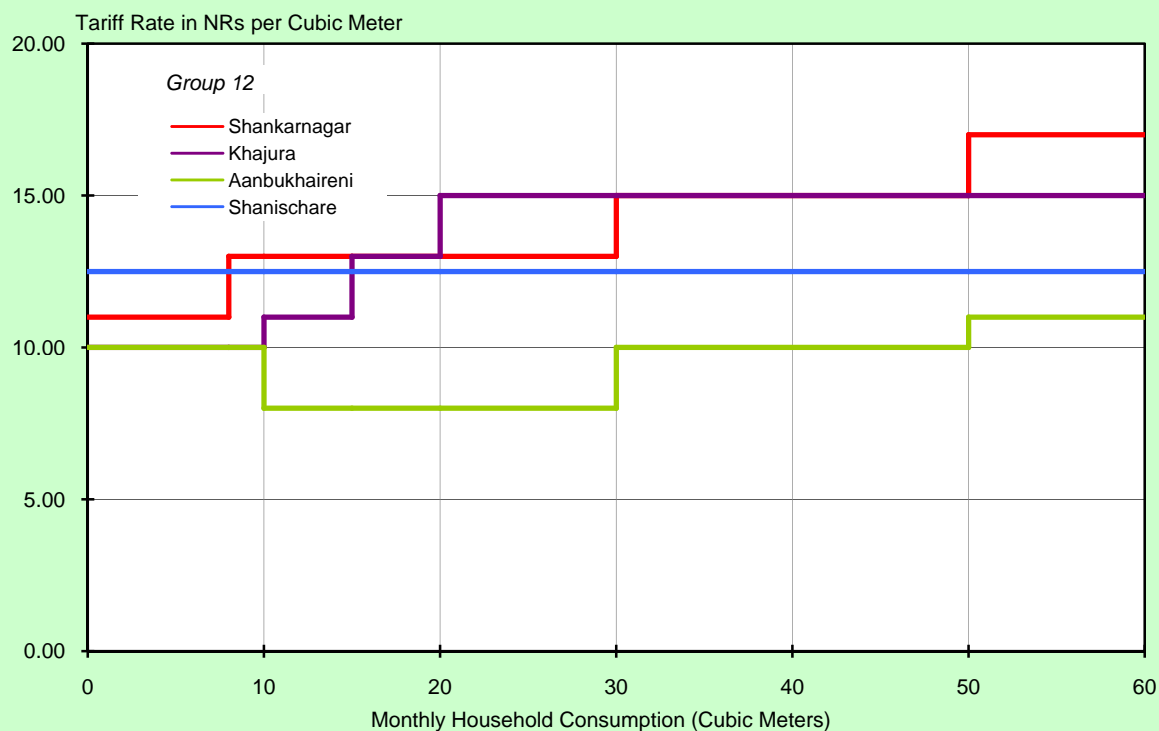


Figure 22a: Unit Production Cost

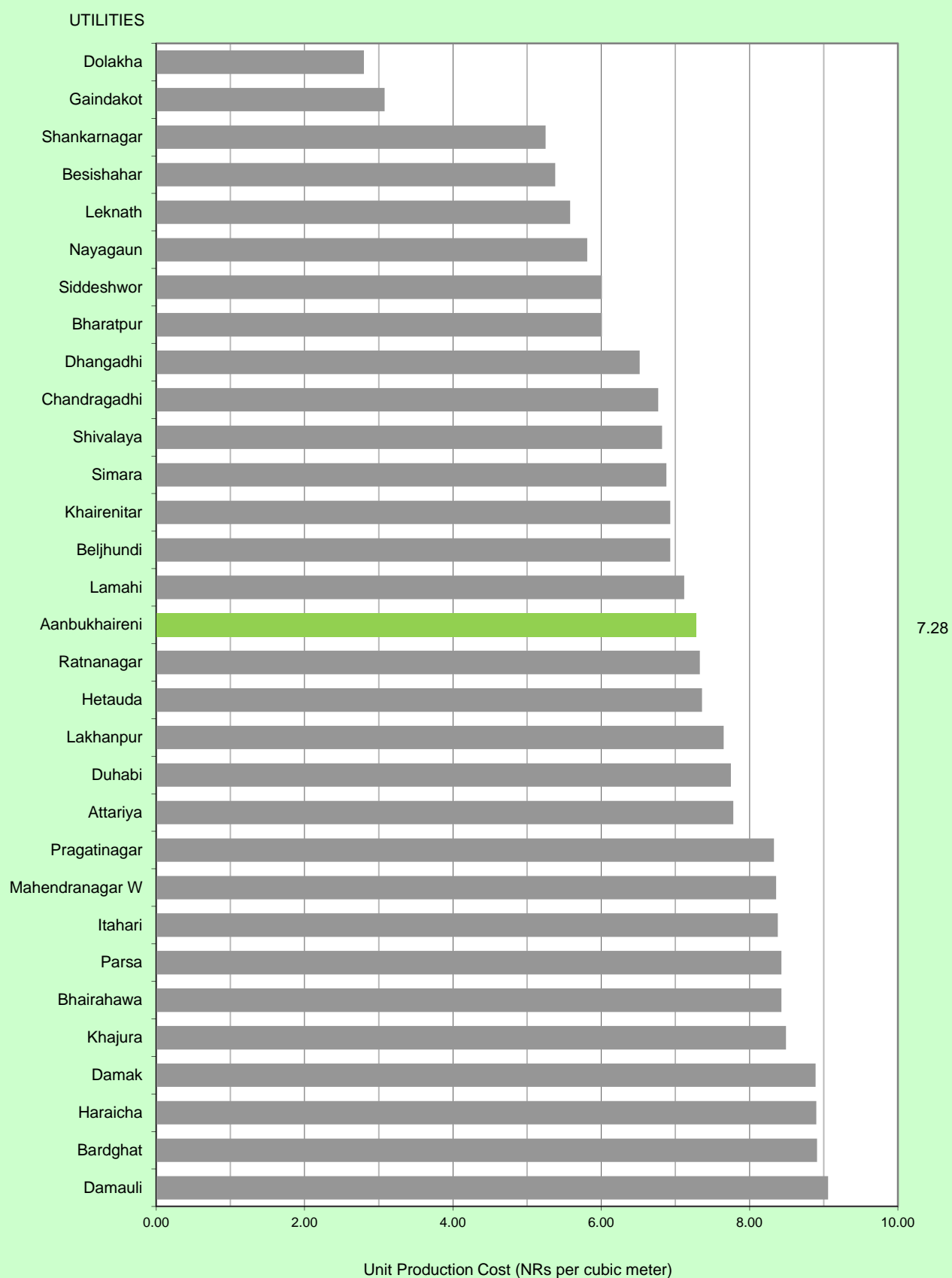


Figure 22b: Unit Production Cost

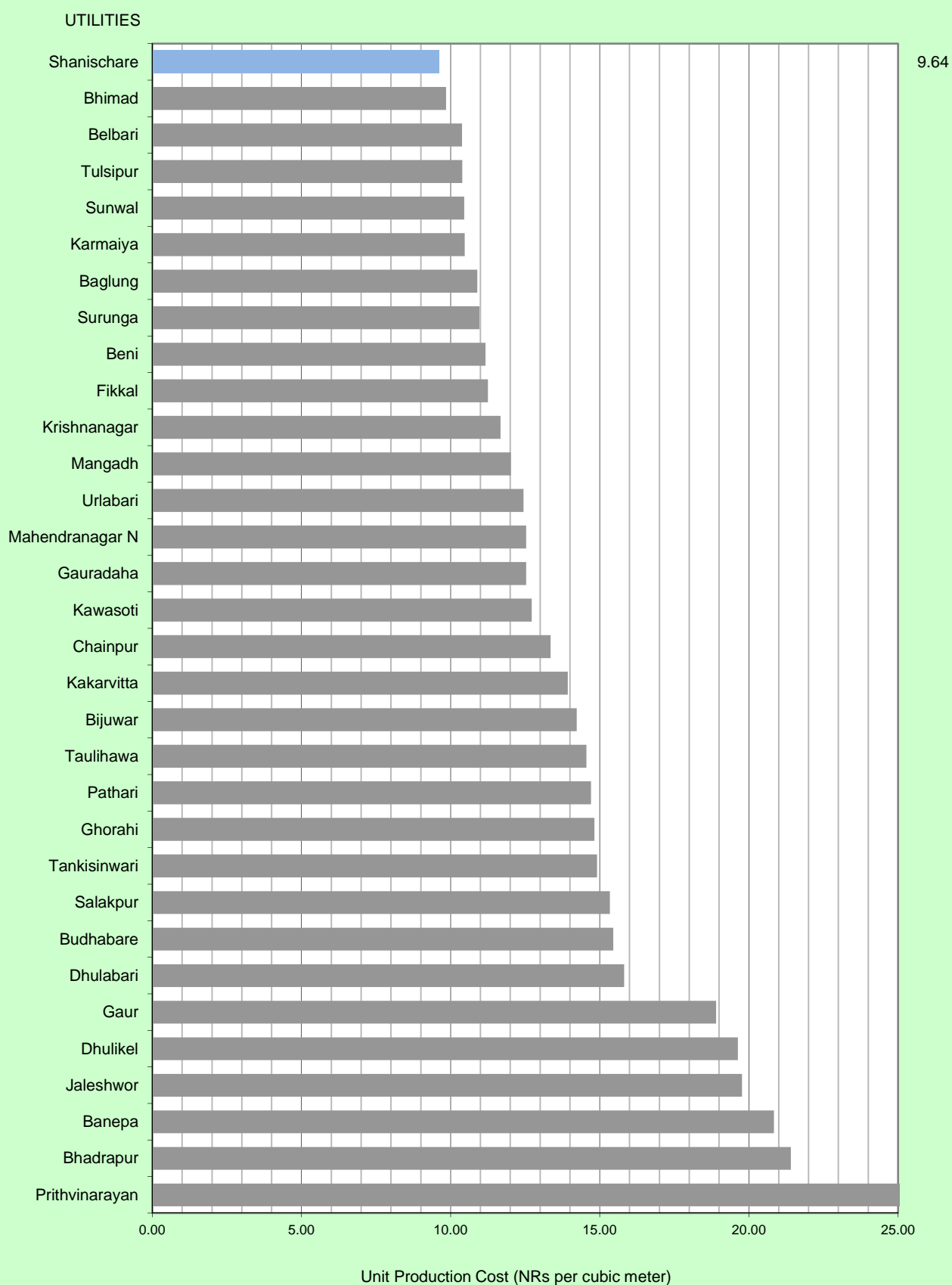


Figure 23a: Connection Fee for Residential Connection

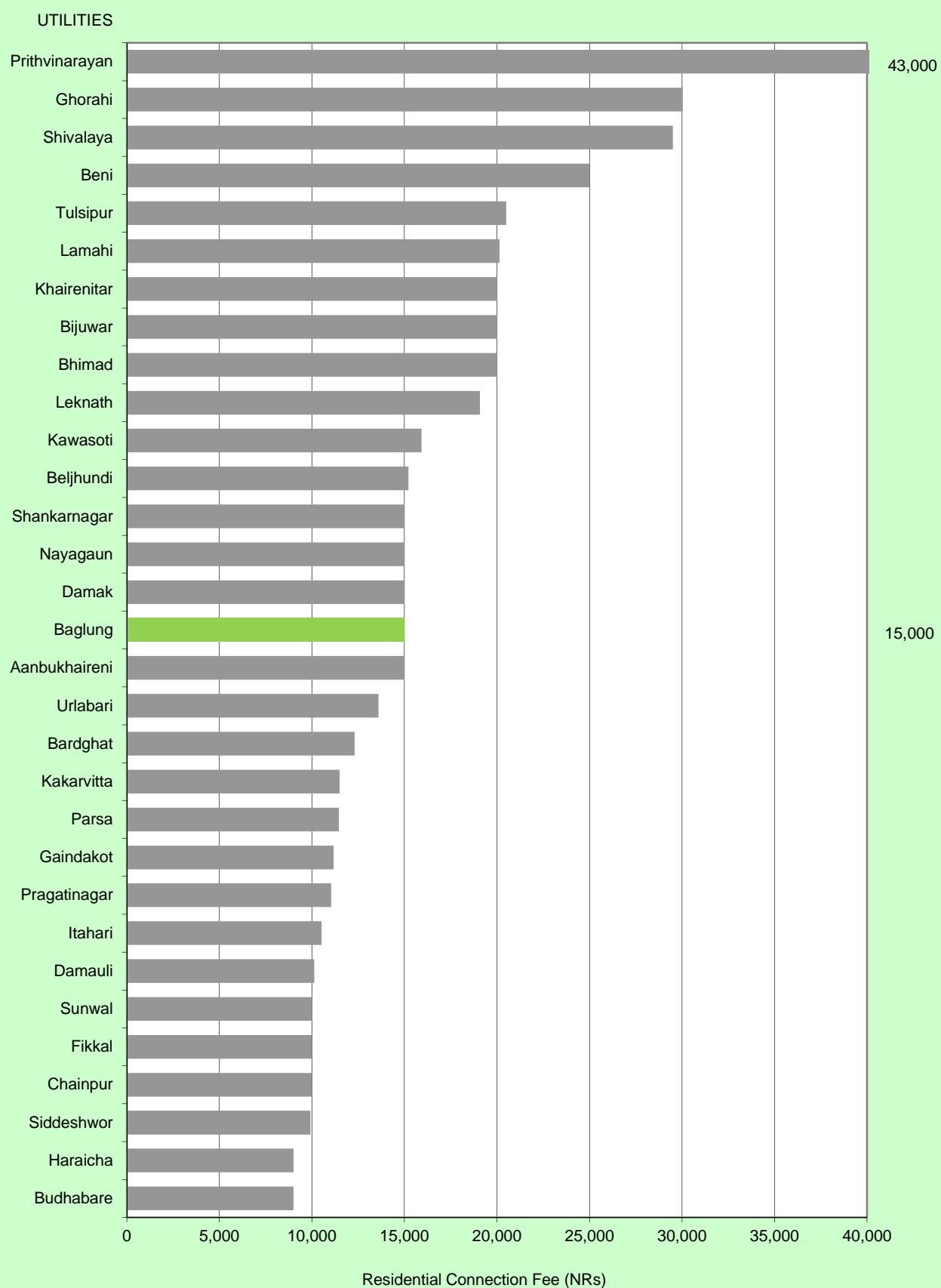


Figure 23b: Connection Fee for Residential Connection

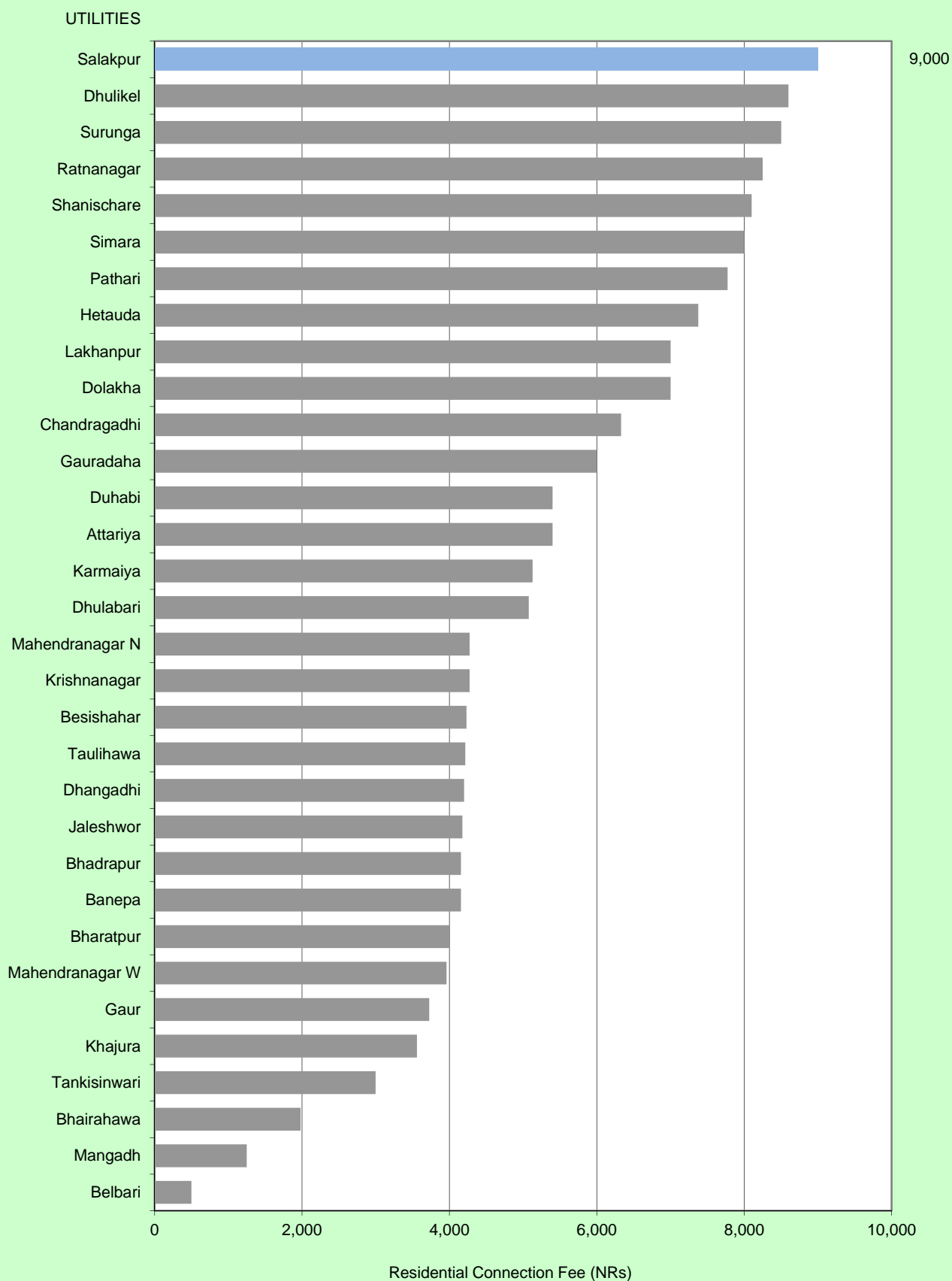


Figure 24a: Annual Operation and Maintenance Costs

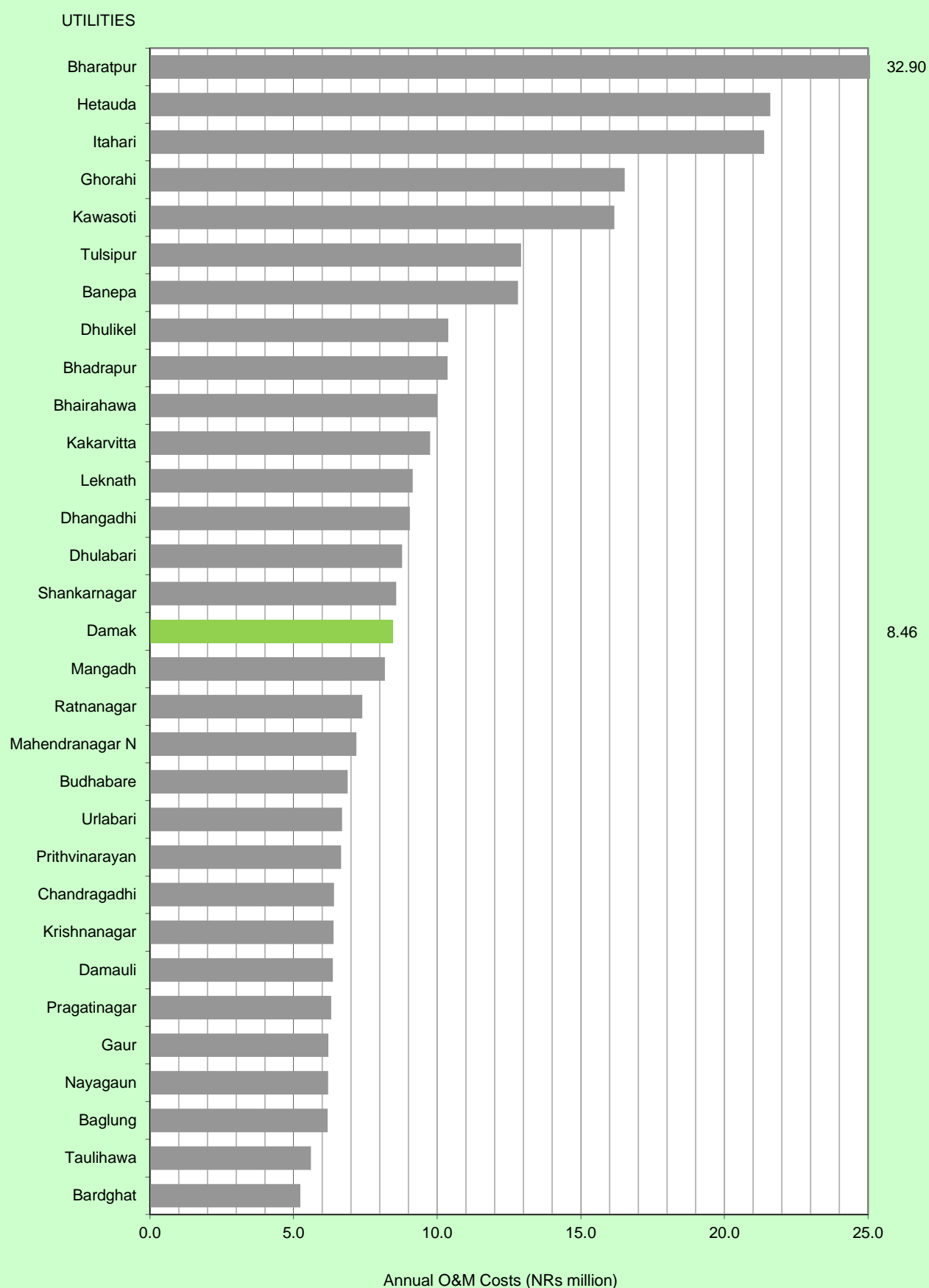


Figure 24b: Annual Operation and Maintenance Costs

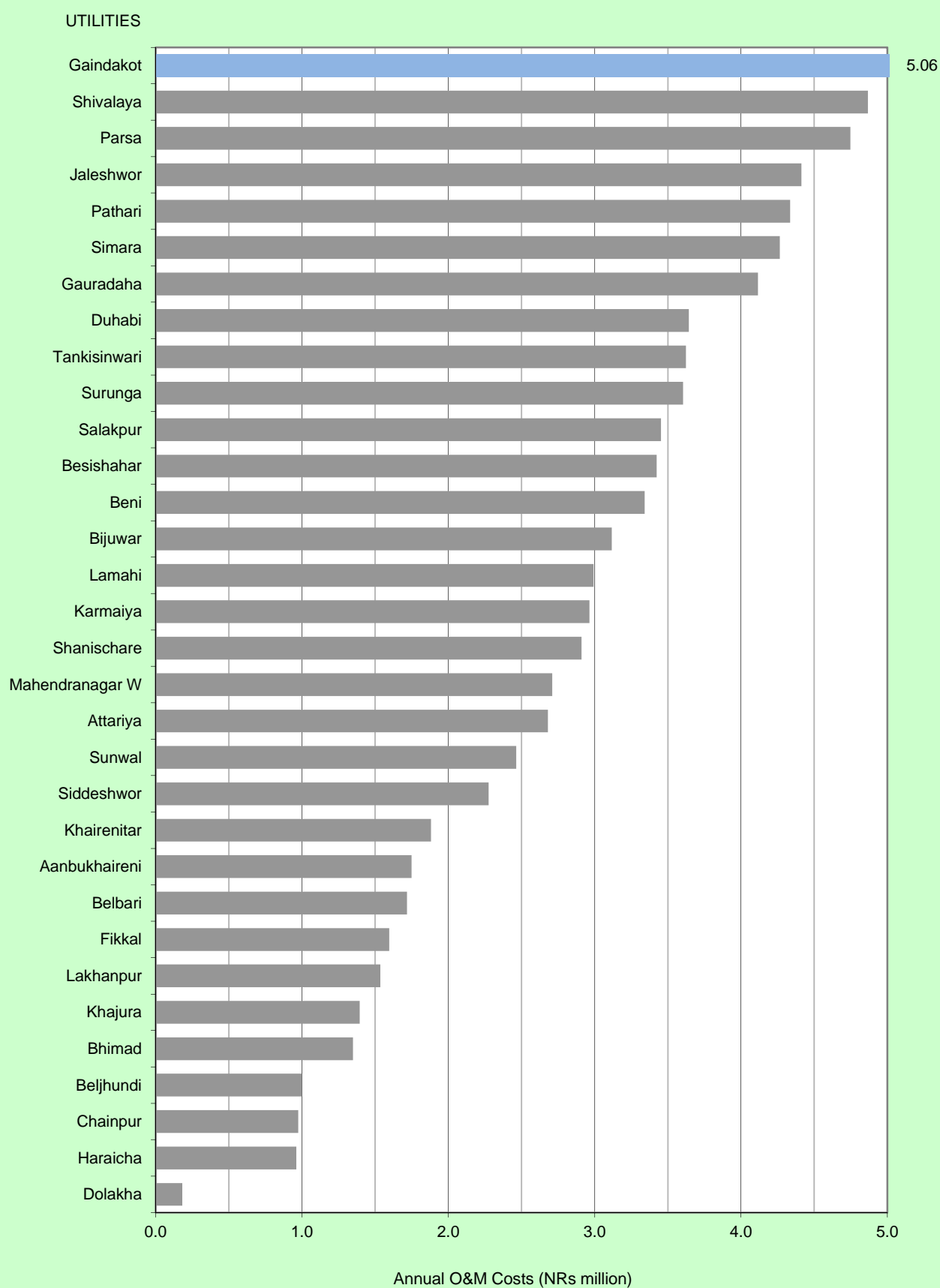


Figure 25a: O&M Cost Components

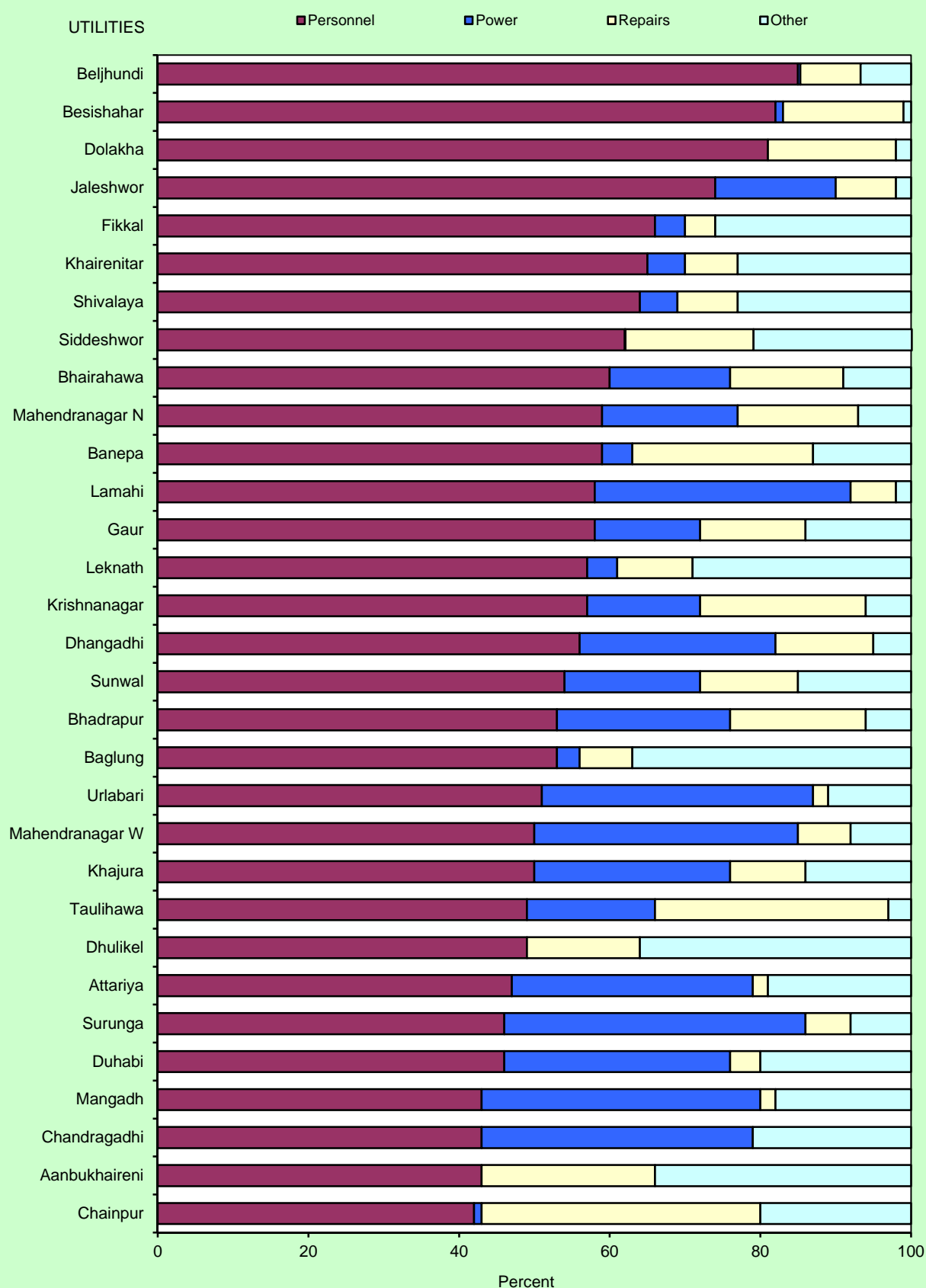


Figure 25b: O&M Cost Components

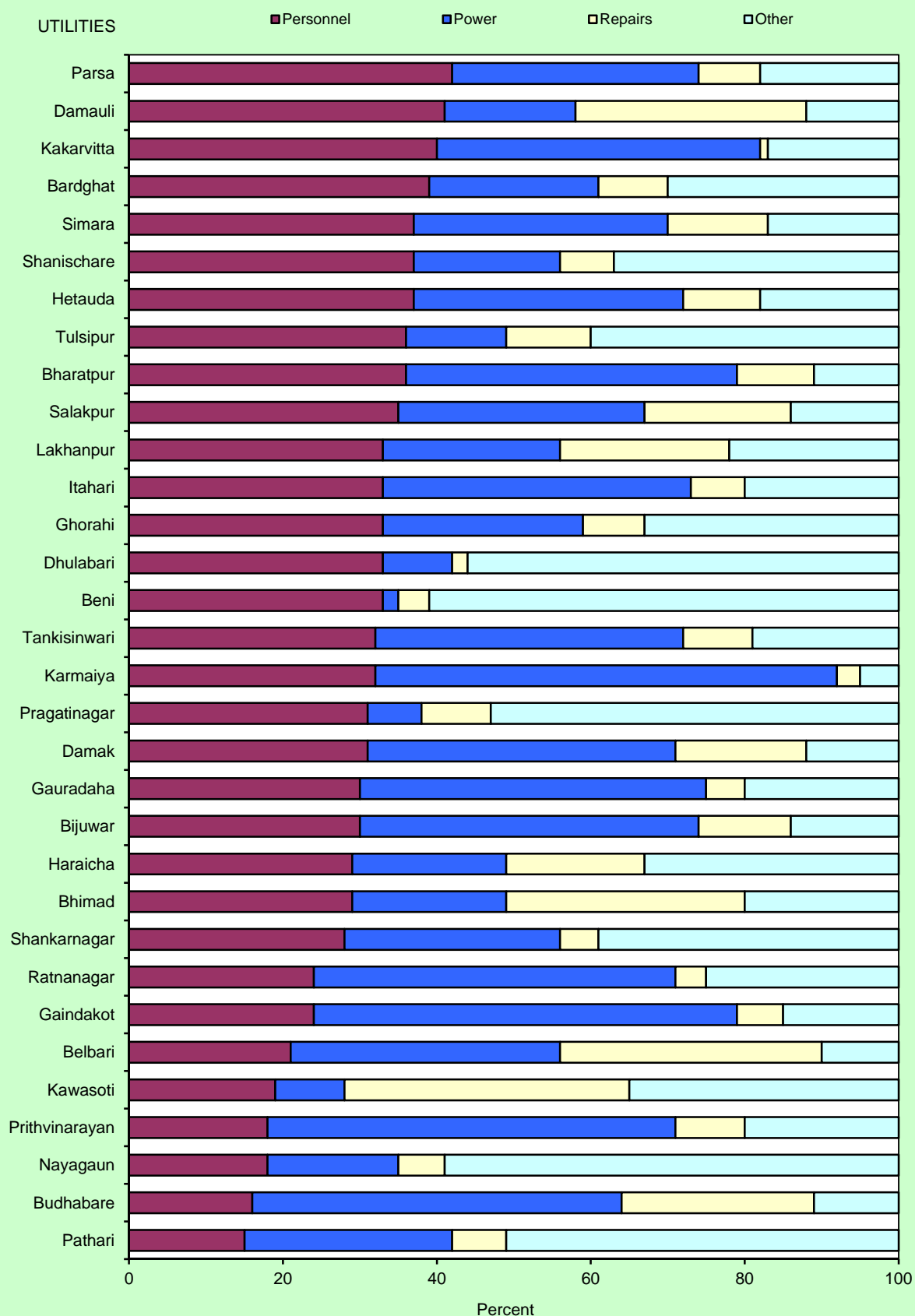


Table 5a: Priority Needs of Service Provider

VDC/Town	Priority Needs		
Aanbukhaireni	Extension and improvement of distribution pipeline.	New office building.	Adjoining laboratory and billing & collection rooms.
Attariya	New bore well.	Maintenance of pipelines.	Treatment plant.
Baglung	Water supply as per demand of consumers.	Provide safe drinking water.	Implement management information system.
Banepa	Source development.	Pipe network extension.	Wastewater and solid waste control.
Bardghat	Drilling of another deep well.	Construction of an overhead tank.	Pipeline extension.
Belbari	Pipeline expansion on both sides of roads.	Extend pipeline to new residential area.	Galvanized iron pipe for pipeline river crossing.
Beljhundi	Construction of deep bore well.	Construction of overhead tank.	Water flow meter.
Beni	Transmission line protection.	Development of better treatment system.	Development of water testing laboratory.
Besishahar	Continuous water supply.	Water treatment facilities.	Source development.
Bhadrapur	Construction of overhead tank.	Pipe network extension.	Relocation of pipelines from center to side of roads.
Bhairahawa	Construction of overhead tank.	Pipe network extension.	Construction of new bore well.
Bharatpur	New source development.	Distribution network.	Additional reservoir.
Bhimad	Water treatment system.	Increase water availability to 3 hours per day.	Develop new water sources.
Bijuwar	Install pressure filter and operate chlorine dosing unit.	Explore new sources of water.	Maintenance and expansion of pipeline.
Budhabare	Water purification.	Increase water production.	Maintenance of physical infrastructure.
Chainpur	Water supply for all households.	Provide water supply for more time to users.	Propagate leak awareness among users.
Chandragadhi	Rehabilitation of old water supply pipelines.	Construction of additional overhead tank.	Train staff on new technology for operations.
Damak	Expansion of distribution system.	Additional overhead tank.	Additional treatment facility.
Damauli	Safe and sufficient drinking water to be provided	Construction of sewerage for healthy environment	Provision for a sanitary landfill for solid waste
Dhangadhi	Additional water sources.	Pipe network extension.	Water quality laboratory facilities.
Dhulabari	Water treatment plant.	Construction of overhead tank.	Drilling of deep bore well.

Table 5b: Priority Needs of Service Provider

VDC/Town		Priority Needs	
Dhulikel	Augmentation of existing water source.	Integration of local water sources into the system.	Completion of the Kavre Valley Water Supply Project.
Dolakha	Water treatment.	Source protection.	Community awareness program.
Duhabi	Improve water quality	Waste management.	Better accounting system to be more transparent.
Fikkal	Introduce treatment plant.	Construct fence around the reservoir.	Construct office building.
Gaindakot	Automatic chlorine dosing unit.	Training for employees.	Alternative options for electricity and fuel.
Gaur	Provide safe drinking water.	Construct overhead tank.	Replace old pipes to reduce NRW and prevent contamination.
Gauradaha	Increase in storage capacity.	Additional borehole or tubewell.	Extension of distribution pipeline.
Ghorahi	Overhead tank construction and distribution lines.	New bore well and sump well in Sewar River.	Installation of slow sand and roughing filters.
Haraicha	Procurement of power generator.	Construction of underground water tank.	Installation of a filtration plant.
Hetauda	Development of source of water.	Development of storage capacity.	Water treatment plants.
Itahari	Additional deep boring.	Construction of office building.	Construction of at least 4 overhead tanks.
Jaleswor	Strong management of safe water supply.	Production of water according to water demand.	Laying of pipeline for all the people of Jaleswor Municipality.
Kakarvitta	Awareness on management.	Water supply round the clock.	Safe water distribution.
Karmaiya	Construction of new bore well.	Upgrading to new pipelines.	Fuel availability and cost.
Kawasoti	Spring source conservation.	Transmission pipes upgrading.	Overhead tank construction.
Khairaitar	Source management.	Additional reservoir.	Distribution system management.
Khajura	Source development.	MIS or computerized billing system.	Construction of a separate store room.
Krishnanagar	Pipeline extension.	Tubewells construction.	Water treatment plant.
Lakhanpur	Electricity problem.	Construction of 250 cu m water reservoir.	Compound wall for additional land.
Lamahi	Water safety plan.	Managed sewerage system.	Separate electric feeder.
Leknath	Leak detection equipment and professional training.	Water testing laboratory and professional training.	Training on water audit, distribution management and system analysis.

Table 5c: Priority Needs of Service Provider

VDC/Town		Priority Needs	
Mahendranagar N	Improve production and distribution systems.	Water quality testing facility.	Extension of pipeline to address users' demand.
Mahendranagar W	Lime control in pipes.	New bore well.	Electric power generator.
Mangadh	New tubewells and rehabilitation of existing ones.	Water treatment facilities and reservoirs.	Water quality testing laboratory.
Nayagaun	Provide enough water to all consumers.	Easy access to water for all.	Quality water supply.
Parsa	Additional overhead tank.	Solid waste management program as mandated to the WSSCA.	Support to Micro Finance Fund (for funding services for the poor).
Pathari	Source development.	Office building.	Computerized billing and accounting system.
Pragatinagar	Rehabilitation of old structures.	Additional source and pipeline extension.	Waste management is a major challenge.
Prithvinarayan	Subsidy for electrical charges in the water tariff.	Electrical feeder line for each pump house.	Transfer of electrical transmission line to electrical authority.
Ratnanagar	Construction of office building and expansion of system.	Capacity building.	Water testing laboratory.
Salakpur	Two additional deep borings.	Additional 450 cu m overhead tank.	Pipeline extension.
Shanischare	Additional overhead tank and deep well.	Extension of pipeline.	Filtration system and power generator.
Shankarnagar	Water supply according to demand.	Cheaper water rates.	Water quality according to government standards.
Shivalaya	Capacity building through training, workshops and field visits.	Increased storage capacities.	Roughing filter for water quality improvement.
Siddeshwor	Additional water source.	Maintenance of filter plant.	Additional reservoir tank.
Simara	Replacement of old pipelines.	Construction of overhead tank at Gadimai Ward No.4.	Tap connection extension to the needy ones.
Sunwal	SWSSC as a high quality water service provider.	Consumer awareness of safe drinking water.	Spring water source from hill.
Surunga	24 hours quality water supply.	Provide water to the whole Surunga VDC.	Develop new bore wells/new sources of water.
Tankisinwari	Administrative building.	Water filter treatment facility.	Computerization facilities and software.
Taulihawa	Pipeline extension.	Tubewells construction.	Water treatment plant.
Tulsiपुर	Overhead water storage tank.	Deep boring.	Extension of distribution pipeline.
Urlabari	To follow 15 years business plan.	To deliver quality water.	To raise user awareness and feeling of ownership.

PART III

Water Utility and Area Profiles

Water Utility	AANBUKHAIRENI WATER SUPPLY USERS AND SANITATION COMMITTEE Address : Ward No.6, Aanbukhaireni Buspark, Kukurgade, Tanahun District Telephone : +977 065 540185 Fax : none E-mail : akt_khanipani185@yahoo.com Head : Nasturam Kandel, Chairman <p>Aanbukhaireni Water Supply Users and Sanitation Committee (AWSUSC) became fully operational in 1996. It is legally registered with the District Water Resource Committee. AWSUSC is responsible for water supply for 2 urban and rural wards of Aanbukhaireni and Deurali VDCs which has a total population of 15,000 people. Its present service area has a population density of 3,333 persons/km². It draws water from one river intake. AWSUSC has no master development plan but it has a water safety plan in place since 2007. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. None of its personnel attended training in 2014. AWSUSC has a partly developed management information system. Only its billing operations is computerized.</p>																																		
Mission Statement	No mission statement.																																		
General Data About Water Utility	Connections : 859 Staff : 7 Annual O&M Costs : NRs1,748,229 Annual Collections : NRs2,053,491 Annual Billings : NRs2,009,465 Annual Capital Expenditure : Nil Other Revenues: NRs307,839 Average capital expenditure/connection/year: Nil <p>Aanbukhaireni Water Supply Users and Sanitation Committee received financial assistance from the government through the VDC for maintenance of the water system.</p>																																		
Tariff Structure	(Used in 2014) <table border="1"> <thead> <tr> <th>Category</th><th>Household</th><th>Government/School Shiva Mandir</th><th>Institutional</th></tr> </thead> <tbody> <tr> <td>MINIMUM CHARGE</td><td>(NRs)</td><td>(NRs)</td><td>(NRs)</td></tr> <tr> <td>(First 10 m³ or less)</td><td>100.00</td><td>100.00</td><td>100.00</td></tr> <tr> <td>ADDITIONAL CHARGE</td><td></td><td></td><td></td></tr> <tr> <td>Consumption (m³)</td><td>(NRs/m³)</td><td>(NRs/m³)</td><td>(NRs/m³)</td></tr> <tr> <td>11 - 30 m³</td><td>8.00</td><td>0.50</td><td>4.00</td></tr> <tr> <td>31 - 50 m³</td><td>10.00</td><td>0.50</td><td>5.00</td></tr> <tr> <td>More than 50 m³</td><td>11.00</td><td>0.50</td><td>5.50</td></tr> </tbody> </table> <p>Notes:</p> <ol style="list-style-type: none"> All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office. There were 31 new connections in 2014. Price of new domestic connection is NRs15,000 payable prior to connection. The urban poor which comprise 2% of the service area population can pay connection fees at subsidized rate and in installments. 			Category	Household	Government/School Shiva Mandir	Institutional	MINIMUM CHARGE	(NRs)	(NRs)	(NRs)	(First 10 m ³ or less)	100.00	100.00	100.00	ADDITIONAL CHARGE				Consumption (m ³)	(NRs/m ³)	(NRs/m ³)	(NRs/m ³)	11 - 30 m ³	8.00	0.50	4.00	31 - 50 m ³	10.00	0.50	5.00	More than 50 m ³	11.00	0.50	5.50
Category	Household	Government/School Shiva Mandir	Institutional																																
MINIMUM CHARGE	(NRs)	(NRs)	(NRs)																																
(First 10 m ³ or less)	100.00	100.00	100.00																																
ADDITIONAL CHARGE																																			
Consumption (m ³)	(NRs/m ³)	(NRs/m ³)	(NRs/m ³)																																
11 - 30 m ³	8.00	0.50	4.00																																
31 - 50 m ³	10.00	0.50	5.00																																
More than 50 m ³	11.00	0.50	5.50																																
Priority Need of Utility	1. Extension and improvement of distribution pipeline. 2. New office building. 3. Adjoining laboratory and billing & collection rooms.																																		
Consumer Service	Average monthly consumption is about 21.1 m ³ per connection. The water bill averages NRs203.67 per month per connection. Water is available 24 hours a day to most users in both the dry months and the wet months. The average pressure at the tap is 10 meters. Applicants have to wait for about 3 days for new connections to be made. Connection fee is paid all at the start. About 35 of 50 water samples taken passed the residual chlorine test in 2014. There were 20 consumer complaints recorded while 105 leaks were repaired during the year. Consumers complain in person at the water utility office or by telephone. The service provider allows subsidized connection fees in installments for the urban poor.																																		
Performance Highlights	AWSUSC provides water at 60 lpcd to its consumers for an average of 24 hours per day during both dry and wet months to 66.7% of the population in its service area. NRW of 9.5% looks good but with production not metered and consumption fully metered, the NRW value is questionable. Financial management is good with operating ratio of 0.83 and accounts receivable equivalent of 0.3 month although collection efficiency of 97.8% needs some improvement. Average tariff of NRs9.66/m ³ is in the lowest quartile yet enough to cover O&M expenses. Staff/1000 connections ratio at 8.1 is a little below the average. AWSUSC's priority should be additional sources of water to increase water provided to its customers and to increase coverage as well. It should also meter its production to have a more accurate determination of non revenue water. The service provider should also invest on training its staff for greater productivity and efficiency.																																		

AANBUKHAIRENI WATER SUPPLY

Population: 10,000 ¹

Production/Distribution

Average Daily Production	658 m ³ /d
Groundwater	Nil
Surface Water	100%
Treatment Type ²	Sedimentation & filtration
Treated water storage	400 m ³
Service Area ³	3.0 sq km
Distribution pipes	8.0 km

Service Connections

House (12 persons/HC)	850
Public Tap (6.4 persons/PT)	0
Commercial	0
Industrial	0
Institutional	9
Other	0
Total	859

Service Indicators

Service Coverage ⁴	66.7%
Water availability/day	24 hours in dry months
	24 hours in wet months
Per Capita Consumption ⁵	60 l/c/d
Average Tariff	NRs9.66/m ³

Efficiency Indicators

Non-Revenue Water ⁶	9.5%
Unit Production Cost	NRs7.28/m ³
Operating Ratio ⁷	0.83
Accounts Receivable	0.3 month
Staff/1,000 Connections	8.1

Notes:

¹ The population is for the present area served by the utility.

² Of 50 water samples taken in 2014, 35 passed the residual chlorine test.

³ Total area of responsibility is 4.0 sq. km.

⁴ The population not served by the water utility draw water from tubewells, springs, rivers and streams.

⁵ This is for total consumption for all types of connections.

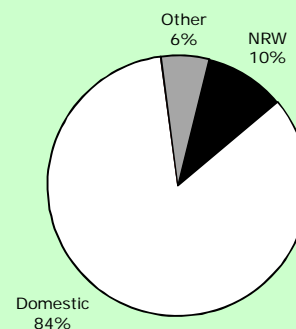
⁶ There were 105 leaks repaired in 2014 while 52 meters were either replaced or repaired.

⁷ The water service provider has no debt service in 2014.

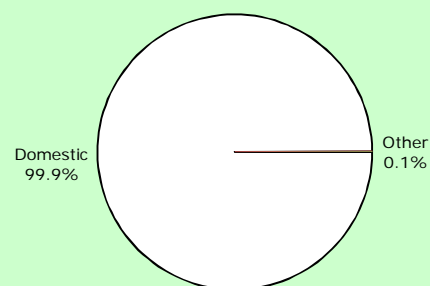
⁸ Other use and billings are for institutional connections.

⁹ Other costs are for miscellaneous expenses.

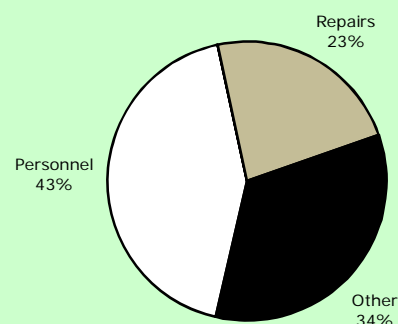
Data as of 2014.



Annual Water Use⁸
240,100 m³



Annual Water Billings⁸
NRs2,099,465



Annual O&M Costs
NRs1,748,229

92

ATTARIYA WATER SUPPLYPopulation: 11,616 ¹**Production/Distribution**

Average Daily Production	9440 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Chlorination
Raw water storage	800 m ³
Service Area ³	50.0 sq km
Distribution pipes	42.0 km

Service Connections

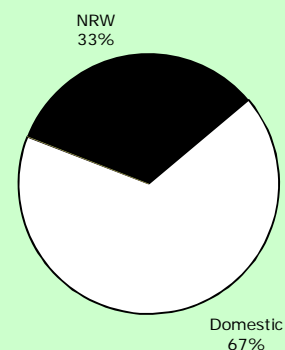
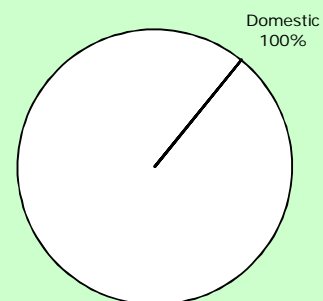
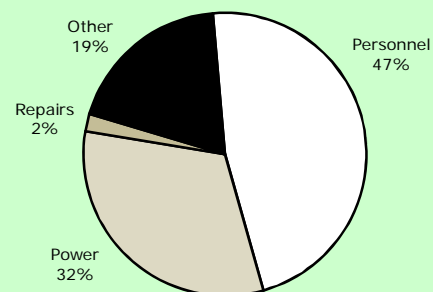
House (6 persons/HC)	1,936
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	1,936

Service Indicators

Service Coverage ⁴	64.5%
Water availability/day	7 hours in dry months 16 hours in wet months
Per Capita Consumption ⁵	55 l/c/d
Average Tariff	NRs20.12/m ³

Efficiency Indicators

Non-Revenue Water ⁶	32.9%
Unit Production Cost	NRs7.78/m ³
Operating Ratio ⁷	0.58
Accounts Receivable	1.9 months
Staff/1,000 Connections	5.7

Notes:¹ The population is for the present area served by the utility.² No water samples were taken in 2014 for residual chlorine test.³ The service area expanded from the original area of responsibility of 42.5 sq. km.⁴ The population not served by the water utility draw water from tubewells.⁵ This is for total consumption which is all from domestic connections.⁶ There were 600 leaks repaired in 2014 while 100 meters were either replaced or repaired.⁷ Operating cost does not include debt service of NRs.2,530,000.⁸ Other costs include chemicals and miscellaneous expenses.**Data as of 2014.****Annual Water Use**
344,668 m³**Annual Water Billings**
NRs4,652,025**Annual O&M Costs⁸**
NRs2,681,172

Water Utility	BAGLUNG URBAN WATER AND SANITATION USERS ASSOCIATION Address : Ward No.2, Mahendrapath, Baglung Municipality, Baglung District Telephone : +977 068 522 301/302 Fax : +977 068 522 301 E-mail : baglungurbandrinkingwater@gmail.com Head : Himat Prasad Sharma, Manager <p>Baglung Urban Water and Sanitation Users Association (BUWSUA) became fully operational in 2008. It is legally registered with the District Water Resources Committee. BUWSUA is responsible for water supply for 6 urban wards of Baglung Municipality which has a total population of 60,000 people. It draws water from two river intakes. It has no master development plan or water safety plan in place. The service provider has an annual report for 2013-2014 that is available to the public as well as an audited financial report for the same year. No personnel attended training in 2014. BUWSUA has no management information system. None of its operations is computerized.</p>																																										
Mission Statement	No mission statement.																																										
General Data About Water Utility	Connections : 3,001 Staff : 15 Annual O&M Costs : NRs6,182,234 Annual Collections : NRs9,067,818 Annual Billings : NRs9,848,796 Annual Capital Expenditure : Nil Other Revenues: NRs1,792,012 Average capital expenditure/connection/year: Nil <p>Baglung Urban Water and Sanitation Users Association received financial assistance from the government through DWSS for expansion project.</p>																																										
Tariff Structure	(Used in 2014) <table border="1"> <thead> <tr> <th>Category</th><th>Private</th><th>Institution</th><th>Government</th></tr> </thead> <tbody> <tr> <td>MINIMUM CHARGE</td><td>(NRs)</td><td>(NRs)</td><td>(NRs)</td></tr> <tr> <td>(First 8 m³ or less)</td><td>100.00</td><td>150.00</td><td>200.00</td></tr> <tr> <td>ADDITIONAL CHARGE</td><td></td><td></td><td></td></tr> <tr> <td>Consumption (m³)</td><td>(NRs/m³)</td><td>(NRs/m³)</td><td>(NRs/m³)</td></tr> <tr> <td>9 - 18 m³</td><td>19.00</td><td>19.00</td><td>19.00</td></tr> <tr> <td>19 - 24 m³</td><td>28.00</td><td>28.00</td><td>28.00</td></tr> <tr> <td>25 - 37 m³</td><td>43.00</td><td>43.00</td><td>43.00</td></tr> <tr> <td>38 - 50 m³</td><td>63.00</td><td>63.00</td><td>63.00</td></tr> <tr> <td>More than 50 m³</td><td>95.00</td><td>95.00</td><td>95.00</td></tr> </tbody> </table> <p>Notes:</p> <ol style="list-style-type: none"> All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office. There were 35 new connections in 2014. Price of new domestic connection is NRs15,000 payable prior to connection. The urban poor which comprise 2% of the service area population have been provided with community taps to groups of families with 95% discount in connection charge. 			Category	Private	Institution	Government	MINIMUM CHARGE	(NRs)	(NRs)	(NRs)	(First 8 m ³ or less)	100.00	150.00	200.00	ADDITIONAL CHARGE				Consumption (m ³)	(NRs/m ³)	(NRs/m ³)	(NRs/m ³)	9 - 18 m ³	19.00	19.00	19.00	19 - 24 m ³	28.00	28.00	28.00	25 - 37 m ³	43.00	43.00	43.00	38 - 50 m ³	63.00	63.00	63.00	More than 50 m ³	95.00	95.00	95.00
Category	Private	Institution	Government																																								
MINIMUM CHARGE	(NRs)	(NRs)	(NRs)																																								
(First 8 m ³ or less)	100.00	150.00	200.00																																								
ADDITIONAL CHARGE																																											
Consumption (m ³)	(NRs/m ³)	(NRs/m ³)	(NRs/m ³)																																								
9 - 18 m ³	19.00	19.00	19.00																																								
19 - 24 m ³	28.00	28.00	28.00																																								
25 - 37 m ³	43.00	43.00	43.00																																								
38 - 50 m ³	63.00	63.00	63.00																																								
More than 50 m ³	95.00	95.00	95.00																																								
Priority Need of Utility	1. Water supply as per demand of consumers. 2. Provide safe drinking water. 3. Implement management information system.																																										
Consumer Service	Average monthly consumption is about 13.2 m ³ per connection. The water bill averages NRs273.49 per month per connection. Water is available 2 hours a day to most users in the dry months and 3 hours a day in the wet months. Average pressure at the tap is 3 meters. Applicants have to wait for about one year for new connections to be made. Connection fee is paid all at the start. No residual chlorine test was conducted in 2014. There were 400 consumer complaints recorded and 400 leaks repaired during the year. Consumers complain in person at the water service provider office when applying for connection or by letter. The service provider has made community taps available to the urban poor.																																										
Performance Highlights	BUWSUA provides water at 29 lpcd to its consumers for an average of 2 hours per day in the dry months and 3 hours per day in the wet months to 81.8% of the population in its service area. NRW of 16.4% is less than the average with production not metered although consumption is 80% metered. Financial management is good with operating ratio at 0.63 in the top quartile, accounts receivable equivalent of 1.0 month although collection efficiency of 92.1% can still be improved. Average tariff of NRs20.75/m ³ is among the top quartile allowing it to cover its expenses well from revenues. Staff/1000 connections ratio at 5.0 is good, better than the average. The service provider may have to increase tariff to allow it to increase water availability to more than 2-3 hours per day and increase the amount of water provided to its consumers which is second lowest. BUWSUA also needs to fully meter its production and all its connections to have a more accurate determination of unaccounted for water. It should monitor its residual chlorine to be able to check on effectiveness of its disinfection measures.																																										

BAGLUNG WATER SUPPLY

Population: 45,000 ¹

Production/Distribution

Average Daily Production	1,555 m ³ /d
Groundwater	Nil
Surface Water	100%
Treatment Type ²	Chlorination
Raw water storage	1,000 m ³
Service Area ³	8.0 sq km
Distribution pipes	35.0 km

Service Connections

House (15 persons/HC)	2,914
Public Tap (55 persons/PT)	18
Commercial	0
Industrial	0
Institutional	69
Other	0
Total	3,001

Service Indicators

Service Coverage ⁴	81.8%
Water availability/day	2 hours in dry months 3 hours in wet months
Per Capita Consumption ⁵	29 l/c/d
Average Tariff	NRs20.75/m ³

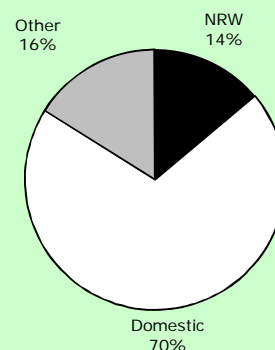
Efficiency Indicators

Non-Revenue Water ⁶	16.4%
Unit Production Cost	NRs10.89/m ³
Operating Ratio ⁷	0.63
Accounts Receivable	1.0 month
Staff/1,000 Connections	5.0

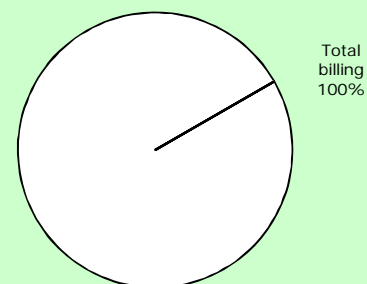
Notes:

- ¹ The population is for the present area served by the utility.
- ² No water samples were taken in 2014 for residual chlorine test.
- ³ Total area of responsibility is 10.0 sq km.
- ⁴ The population not served by the water utility draw water from other service providers, springs, rivers and streams.
- ⁵ This is based on total consumption from domestic and institutional connections.
- ⁶ There were 400 leaks repaired in 2014 while 300 meters were either replaced or repaired.
- ⁷ The water service provider has no debt service.
- ⁸ Other use is for institutional connections.
- ⁹ No breakdown of billing by type of connection was given.
- ¹⁰ Other costs is for miscellaneous expenses.

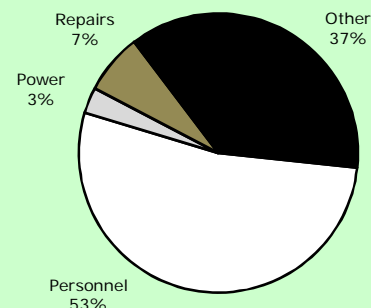
Data as of 2014.



Annual Water Use⁸
567,575 m³



Annual Water Billings⁸
NRs9,848,796



Annual O&M Costs
NRs6,182,234

BANEPA WATER SUPPLY

Population: 24,650 ¹

Production/Distribution

Average Daily Production	1,685 m ³ /d
Groundwater	Nil
Surface Water	100%
Treatment Type ²	Chlorination
Raw water storage	1,135 m ³
Service Area ³	16.1 sq km
Distribution pipes	30.0 km

Service Connections

House (6 persons/HC)	3,089
Public Tap (50 persons/PT)	105
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	3,194

Service Indicators

Service Coverage ⁴	41.6%
Water availability/day	1.5 hours in dry months 1.5 hours in wet months
Per Capita Consumption ⁵	54 l/c/d
Average Tariff	NRs14.22/m ³

Efficiency Indicators

Non-Revenue Water ⁶	20.8%
Unit Production Cost	NRs20.84/m ³
Operating Ratio ⁷	1.85
Accounts Receivable	8.1 month
Staff/1,000 Connections	10.6

Notes:

¹ The population is for the present area served by the utility.

² No water samples were taken in 2014 for residual chlorine test.

³ Total area of responsibility is 108.4 sq. km.

⁴ The population not served by the water utility draw water from other piped water service provider, service providers, tube wells, springs, rivers and streams.

⁵ This is for total consumption which is all from domestic connections.

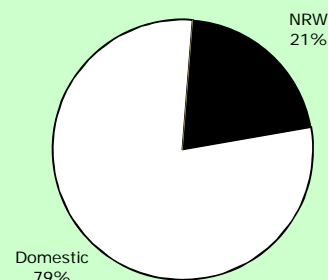
⁶ There were 77 leaks repaired in 2014 while 37 meters were either replaced or repaired.

⁷ The water service provider has no debt service in 2014.

⁸ All use and billings are for domestic connections including public taps.

⁹ Other costs include chemicals and miscellaneous expenses.

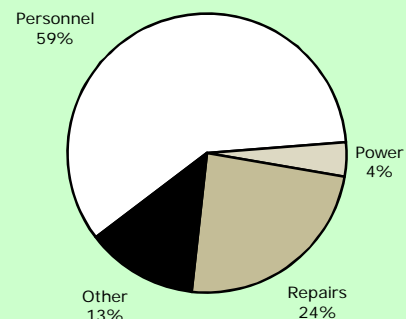
Data as of 2014.



Annual Water Use⁸
614,952 m³



Annual Water Billings⁸
NRs6,924,507



Annual O&M Costs⁹
NRs12,814,958

Water Utility	BARDGHAT WATER SUPPLY AND SANITATION USERS ASSOCIATION																				
	Address : Ward No.4, Bazar, Bardghat Municipality, Nawalparasi District Telephone : +977 078 580602 Fax : +977 078 580602 E-mail : b.bhusal7@gmail.com Head : Kaman Singh Thapa, Chairperson																				
	Bardghat Water Supply and Sanitation Users Association (BWSSUA) became fully operational in 1999. It is legally registered with the District Water Resource Committee. BWSSUA is responsible for water supply for 4 urban wards of Bardghat which has a total population of 17,000 people. Its present service area has a population density of 4,706 persons/km ² . It draws water from 2 wells and 2 river and spring intakes. It has no master development plan but has a water safety plan in place since 2011. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. Seven personnel attended training funded by the government in 2014. BWSSUA has a partially developed management information system and its billing operations are computerized.																				
Mission Statement	One House, One Tap.																				
General Data About Water Utility	<div>Connections : 2,571</div> <div>Staff : 12</div> <div>Annual O&M Costs : NRs5,232,507</div> <div>Annual Collections : NRs6,960,781</div> <div>Annual Billings : NRs7,071,275</div> <div>Annual Capital Expenditure : NRs1,251,792</div> <div>Other Revenues: NRs3,020,278</div> <div>Average capital expenditure/connection/year: NRs486.89</div> <div>Bardghat Water Supply and Sanitation Users Association received technical and financial assistance from the government through WSSDO for capital development.</div>																				
Tariff Structure	<div>(Used in 2014)</div> <table><tr><th>Category</th><th>All Users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>120.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>11 - 30 m³</td><td>15.00</td></tr><tr><td>31 - 50 m³</td><td>20.00</td></tr><tr><td>51 - 100 m³</td><td>25.00</td></tr><tr><td>More than 100 m³</td><td>30.00</td></tr></table> <div>Notes:<div>1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.</div><div>2. There were 167 new connections in 2014. Price of new domestic connection is NRs12,305 payable prior to connection.</div><div>3. The urban poor which comprise 5% of the service area population pay 50% of the connection fee prior to connection with the remaining balance paid in installment.</div></div>			Category	All Users	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	120.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	11 - 30 m ³	15.00	31 - 50 m ³	20.00	51 - 100 m ³	25.00	More than 100 m ³	30.00
Category	All Users																				
MINIMUM CHARGE	(NRs)																				
(First 10 m ³ or less)	120.00																				
ADDITIONAL CHARGE																					
Consumption (m ³)	(NRs/m ³)																				
11 - 30 m ³	15.00																				
31 - 50 m ³	20.00																				
51 - 100 m ³	25.00																				
More than 100 m ³	30.00																				
Priority Need of Utility	1. Drilling of another deep well.2. Construction of an overhead tank.3. Pipeline extension.																				
Consumer Service	Average monthly consumption is about 15.0 m ³ per connection. The water bill averages NRs229.20 per month per connection. Water is available 12 hours a day to most users in the dry months and 16 hours a day in the wet months. Average pressure at the tap is 16 meters. Applicants have to wait for about 7 days for new connections to be made. Connection fee is paid all at the start. All 12 water samples taken in 2014 passed the residual chlorine test. There were 720 consumer complaints reported and an equal number of leaks were repaired during the year. Consumers can complain in person at the water service provider's office or by telephone. The service provider allows the urban poor to connect to the water system with connection fee paid in installment.																				
Performance Highlights	BWSSUA provides water at 84 lpcd to its consumers for an average of 12 hours per day during the dry months and 16 hours per day in the wet months to 88.8% of the population in its service area. NRW of 21.3% is just about average with consumption fully metered but not for production rendering the NRW value unreliable. Financial management is good with operating ratio of 0.74, accounts receivable equivalent of 0.2 month and collection efficiency of 98.4%. Average tariff of NRs15.30/m ³ is about average which is more than enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 4.7 is good and just about the top quartile. With a low operating ratio, BWSSUA may be able to develop new sources to increase water supply to customers and expand coverage with some increase in tariff. It should also meter its production to have a better determination of its losses. BWSSUA should monitor residual chlorine according to the national drinking water quality standards.																				

BARDGHAT WATER SUPPLY

Population: 16,000 ¹

Production/Distribution

Average Daily Production	1,609 m ³ /d
Groundwater	68%
Surface Water	32%
Treatment Type ²	Sedimentation
Raw water storage	700 m ³
Service Area ³	3.4 sq km
Distribution pipes	56.0 km

Service Connections

House (6 persons/HC)	2,527
Public Tap	0
Commercial	0
Industrial	0
Institutional	44
Other	0
Total	2,571

Service Indicators

Service Coverage ⁴	88.8%
Water availability/day	12 hours in dry months 16 hours in wet months
Per Capita Consumption ⁵	84 l/c/d
Average Tariff	NRs15.30/m ³

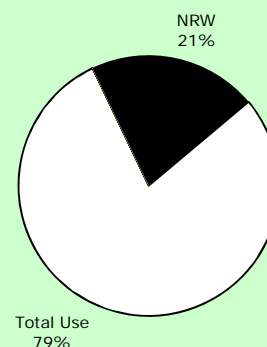
Efficiency Indicators

Non-Revenue Water ⁶	21.3%
Unit Production Cost	NRs8.91/m ³
Operating Ratio ⁷	0.74
Accounts Receivable	0.2 month
Staff/1,000 Connections	4.7

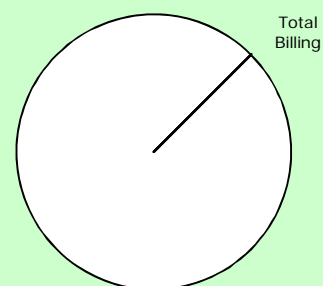
Notes:

- ¹ The population is for the present area served by the utility.
- ² All 12 water samples taken in 2014 passed the residual chlorine test.
- ³ This is also the total area of responsibility.
- ⁴ The population not served by the water utility draw water from tubewells and dug wells.
- ⁵ This is for the total consumption from domestic and institutional connections.
- ⁶ There were 720 leaks repaired in 2014 while 60 meters were either replaced or repaired.
- ⁷ This does not include debt service of NRs1,972,478.
- ⁸ Total use and billings are for domestic and institutional connections.
- ⁹ Other costs include chemicals and miscellaneous expenses.

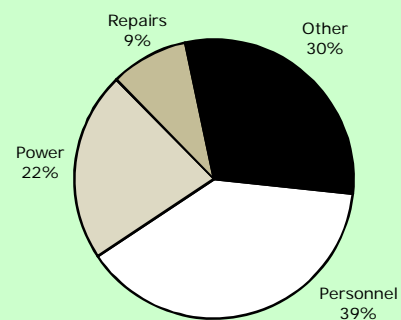
Data as of 2014.



Annual Water Use⁸
587,407 m³



Annual Water Billings⁸
NRs7,071,275



Annual O&M Costs⁹
NRs5,232,507

Water Utility	BELBARI SMALL TOWN WATER AND SANITATION USERS COMMITTEE																										
	Address : Ward No.3, Paramdanda, Belbari, Morang District Telephone : +977 021 545433 Fax : none E-mail : none Head : Mahendra Prasad Subedi, Chairperson																										
	Belbari Small Town Water and Sanitation Users Committee (BSTWSUC) became fully operational in 2008. It is legally registered with the District Water Resource Committee. BSTWSUC is responsible for water supply for 4 urban and rural wards of Belbari which has a total population of 25,000 people. It draws water from two tubewells. It has no master development plan but it has a water safety plan in place since 2012. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. One personnel attended training provided by DWSSDO in 2014. BSTWSUC has a partly developed management information system. None of its operations is computerized.																										
Mission Statement	No mission statement.																										
General Data About Water Utility	Connections : 876 Staff : 5 Annual O&M Costs : NRs1,717,799 Annual Collections : NRs1,336,820 Annual Billings : NRs1,782,426 Annual Capital Expenditure : NRs 11,500 Other Revenues: NRs386,573 Average capital expenditure/connection/year: NRs13.13																										
	Belbari Small Town Water and Sanitation Users Committee received no assistance from the government, NGOs and funding agencies in recent years.																										
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>House</th><th>Institution</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>150.00</td><td>300.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td><td>(NRs/m³)</td></tr><tr><td>More than 10 m³</td><td>10.00</td><td>10.00</td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table> <p>Notes:</p> <ol style="list-style-type: none">1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.2. There were 110 new connections in 2014. Price of new domestic connection is only NRs500 payable prior to connection.3. The urban poor which comprise 28% of the urban population have been provided with tap connection at minimal amount after recommendation from the local VDC.			Category	House	Institution	MINIMUM CHARGE	(NRs)	(NRs)	(First 10 m ³ or less)	150.00	300.00	ADDITIONAL CHARGE			Consumption (m ³)	(NRs/m ³)	(NRs/m ³)	More than 10 m ³	10.00	10.00						
Category	House	Institution																									
MINIMUM CHARGE	(NRs)	(NRs)																									
(First 10 m ³ or less)	150.00	300.00																									
ADDITIONAL CHARGE																											
Consumption (m ³)	(NRs/m ³)	(NRs/m ³)																									
More than 10 m ³	10.00	10.00																									
Priority Need of Utility	1. Pipeline expansion on both sides of roads.	2. Extend pipeline to new residential area.	3. Galvanized iron pipe for pipeline river crossing.																								
Consumer Service	Average monthly consumption is about 7.7 m ³ per connection. The water bill averages NRs169.56 per month per connection. Water is available 4 hours a day to most users in the dry months and 8 hours a day in the wet months. Average pressure at the tap is 9 meters. Applicants have to wait for only one day for new connections to be made. Connection fee is paid all at the start. All 4 water samples taken passed the residual chlorine test in 2014. There were only 9 consumer complaints recorded and 108 leaks repaired during the year. Consumers can complain through letter and by telephone. The service provider has made minimal tap connection fees available to the urban poor.																										
Performance Highlights	BSTWSUC provides water at only 44 lpcd to its consumers, way below the average, for an average of 4 hours per day in the dry months and 8 hours in the wet months to 20% of the population, the lowest coverage. NRW of 51% is the highest with production fully metered and consumption 96.6%metered. Except for operating ratio of 0.96, financial management needs improvement with accounts receivable equivalent of 3 months and the lowest collection efficiency of 75%. Average tariff of NRs21.96/m ³ is in the top quartile but barely enough to cover O&M expenses. Staff/1000 connections ratio at 5.7 is better than average. The service provider needs increase water availability to more than 8 hours per day, the amount of water provided its customers and expand service to more people. BSTWSUC needs to collect all of its water bills and on time as well. Priority should be in reducing its water losses which may be one way of increasing water supplied to customers and increasing its coverage. The service provider should consider increasing the number of water samples tested for residual chlorine according to national drinking water quality standards.																										

BELBARI WATER SUPPLY

Population: 5,000 ¹

Production/Distribution

Average Daily Production	454 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Pressure filter
Total water storage	450 m ³
Service Area ³	14.0 sq km
Distribution pipes	47.0 km

Service Connections

House (5.5 persons/HC)	864
Public Tap	0
Commercial	0
Industrial	0
Institutional	12
Other	0
Total	876

Service Indicators

Service Coverage ⁴	20.0%
Water availability/day	4 hours in dry months 8 hours in wet months
Per Capita Consumption ⁵	44 l/c/d
Average Tariff	NRs21.96/m ³

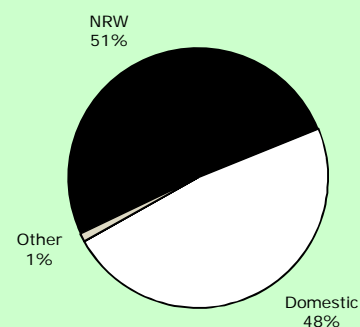
Efficiency Indicators

Non-Revenue Water ⁶	51.0%
Unit Production Cost	NRs10.38/m ³
Operating Ratio ⁷	0.96
Accounts Receivable	3.0 months
Staff/1,000 Connections	5.7

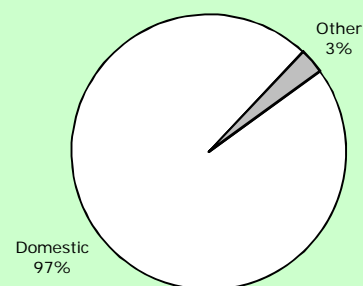
Notes:

- ¹ The population is for the present area served by the utility.
- ² All 4 water samples taken in 2014 passed the residual chlorine test.
- ³ The total area of responsibility is 44 sq. km..
- ⁴ The population not served by the water utility draw water from tubewells.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 108 leaks repaired in 2014 while no meter was either replaced or repaired.
- ⁷ The water service provider has debt but could not pay debt service in 2014.
- ⁸ Other use and billing include those from institutional connections.
- ⁹ Other costs include chemical, transport and miscellaneous expenses.

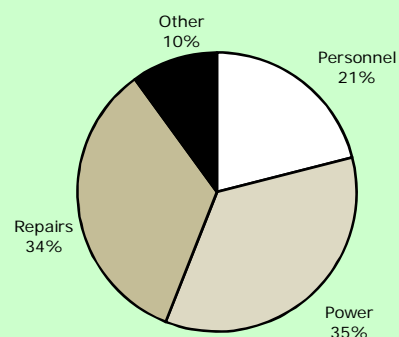
Data as of 2014.



Annual Water Use⁸
165,564 m³



Annual Water Billings⁸
NRs1,782,426



Annual O&M Costs⁹
NRs1,717,799

Water Utility	BELJHUNDI WATER SUPPLY AND SANITATION USERS ASSOCIATION																		
	Address : Ward No.4, Beljhundi, Bijauri Town, Dang District Telephone : +977 082 400053 Fax : none E-mail : none Head : Pradeep Gautam, Chairperson																		
	Beljhundi Water Supply and Sanitation Users Association (BWSSUA) became fully operational in 1983. It is legally registered with the District Water Resource Committee. BWSSUA is responsible for water supply for 10 urban and rural wards of Bijauri and Manpur which has a total population of 16,793 people. Its present service area has a population density of 215 persons/km ² . It draws water from 2 river and spring intakes. It has no master development plan but has a water safety plan in place since 2013. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. No personnel attended training in 2014. BWSSUA has no management information system. None of its operations are computerized or automated.																		
Mission Statement	Safe drinking water, healthy life. Maintain your habit, start drinking pure water.																		
General Data About Water Utility	Connections : 657 Staff : 7 Annual O&M Costs : NRs998,483 Annual Collections : NRs721,982 Annual Billings : NRs679,110 Annual Capital Expenditure : NRs578,208 Other Revenues: NRs2,337,714 Average capital expenditure/connection/year: NRs880.07 Beljhundi Water Supply and Sanitation Users Association did not receive any assistance from the government, non government organizations, or funding agencies in the past year.																		
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>All Users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 12 m³ or less)</td><td>100.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>13 - 25 m³</td><td>10.00</td></tr><tr><td>More than 25 m³</td><td>15.00</td></tr><tr><td colspan="2">Community tap users pay a flat rate of NRs50 per month.</td></tr></table> <p>Notes:</p> <p>1. All consumers pay on metered use or flat rate. Consumers are billed monthly. Water bills are paid at the water service provider's office.</p> <p>2. There were 97 new connections in 2014. Price of new domestic connection is NRs15,215 payable prior to connection.</p> <p>3. The urban poor which comprise 33% of the service area population are provided with community taps courtesy of the VDC without charge.</p>			Category	All Users	MINIMUM CHARGE	(NRs)	(First 12 m ³ or less)	100.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	13 - 25 m ³	10.00	More than 25 m ³	15.00	Community tap users pay a flat rate of NRs50 per month.	
Category	All Users																		
MINIMUM CHARGE	(NRs)																		
(First 12 m ³ or less)	100.00																		
ADDITIONAL CHARGE																			
Consumption (m ³)	(NRs/m ³)																		
13 - 25 m ³	10.00																		
More than 25 m ³	15.00																		
Community tap users pay a flat rate of NRs50 per month.																			
Priority Need of Utility	1. Construction of deep bore well. 2. Construction of overhead tank. 3. Water flow meter.																		
Consumer Service	Average monthly consumption is about 14.5 m ³ per connection. The water bill averages NRs86.12 per month per connection. Water is available 2 hours a day to most users in both dry months and the wet months. Average pressure at the tap is 5 meters. Applicants have to wait for about 6 days for new connections to be made. Connection fee is paid all at the start. Of 24 water samples taken in 2014, 17 passed the residual chlorine test. There were only 9 consumer complaints reported and 217 leaks repaired during the year. Consumers can complain in person at the water service provider's office, by telephone or by writing a letter. The service provider provides the urban poor with community taps in behalf of the VDC.																		
Performance Highlights	BWSSUA provides water at only 37 lpcd to its consumers for an average of only 2 hours per day throughout the year to 50% of the population in its service area. NRW of 20.8% is just below the average with consumption 92.1% metered but none for production rendering the NRW value unreliable. Operating ratio is ninth highest at 1.47, accounts receivable equivalent fifth highest at 3.3 months and collection efficiency at 106.3% suggests collection of past arrears. Average tariff of NRs5.96/m ³ is fourth lowest which is not enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 10.7 is eighth highest. BWSSUA needs to develop new sources to increase water supply to customers for longer hours and expand coverage which will require increasing tariff. It should also meter its production and all connections to have a better determination of its losses. BWSSUA should send its staff to training courses to develop their capacity and increase their productivity.																		

BELJHUNDI WATER SUPPLYPopulation: 8,395 ¹**Production/Distribution**

Average Daily Production	395 m ³ /d
Groundwater	Nil
Surface Water	100%
Treatment Type ²	Sedimentation & filtration
Treated water storage	400 m ³
Service Area ³	39.0 sq km
Distribution pipes	39.1 km

Service Connections

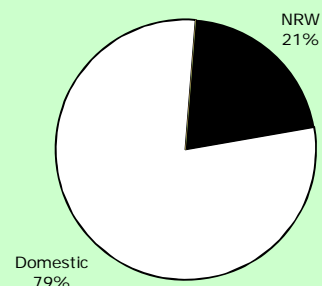
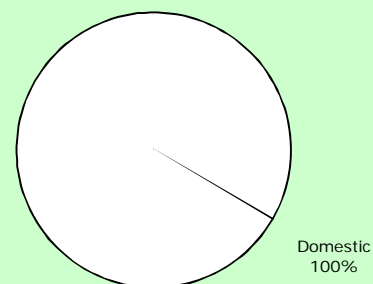
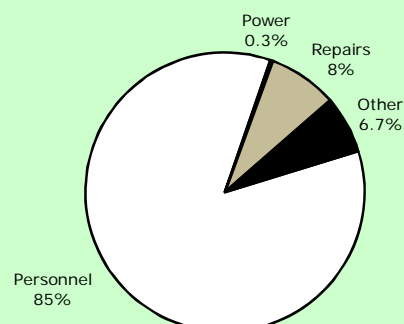
House (7 persons/HC)	605
Public Tap (80 persons/PT)	52
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	657

Service Indicators

Service Coverage ⁴	50.0%
Water availability/day	2 hours in dry months 2 hours in wet months
Per Capita Consumption ⁵	37 l/c/d
Average Tariff	NRs5.96/m ³

Efficiency Indicators

Non-Revenue Water ⁶	20.8%
Unit Production Cost	NRs6.93/m ³
Operating Ratio ⁷	1.47
Accounts Receivable	3.3 months
Staff/1,000 Connections	10.7

Notes:¹ The population is for the present area served by the utility.² Of 24 water samples taken in 2014, 17 passed the residual chlorine test.³ Total service area expanded from original area of responsibility of 35.0 sq. km.⁴ The population not served by the water utility draw water from other piped water service providers, dug wells, springs, rivers and streams.⁵ This is for total consumption which is all domestic.⁶ There were 217 leaks repaired in 2014 while 18 meters were either replaced or repaired.⁷ The water service provider has no debt service in 2014.⁸ Domestic use and billings are from house connections and community taps.⁹ Other costs include transport, chemicals and miscellaneous expenses.**Data as of 2014.****Annual Water Use⁸**
144,000 m³**Annual Water Billings⁸**
NRs679,110**Annual O&M Costs**
NRs998,483

Water Utility	BENI WATER SUPPLY AND SANITATION USERS ASSOCIATION																						
	Address : Ward No.2, Beni Bazar, Arthunge VDC, Myagdi District Telephone : +977 069 520263 Fax : +977 069 520523 E-mail : none Head : Subhash Kumar Shrestha, Chairperson																						
	Beni Water Supply and Sanitation Users Association (BWSUA) became fully operational in 2005. It is legally registered with the District Water Resource Committee. BWSUA is responsible for water supply for 5 urban and rural wards in 4 VDCs which has a total population of 15,600 people. It draws water from 5 intakes on the Pumdi River, Ritthakharka and Pumdi Springs, the Dudhe and Kopre streams. It has no master development plan but has a water safety plan in place since 2010. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. No staff attended training in 2014. BWSUA has a partly developed management information system. Its billing system is computerized.																						
Mission Statement	Pure water healthy life.																						
General Data About Water Utility	Connections : 920 Staff : 8 Annual O&M Costs : NRs3,342,128 Annual Collections : NRs6,549,768 Annual Billings : NRs6,899,768 Annual Capital Expenditure : Nil Other Revenues: NRs1,845,313 Average capital expenditure/connection/year: Nil Beni Water Supply and Sanitation Users Association has not received any financial assistance from the government and NGOs in recent years.																						
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>All Users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>200.00</td></tr><tr><td>COMMODITY CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>11 - 20</td><td>22.00</td></tr><tr><td>21 - 30</td><td>24.00</td></tr><tr><td>31 - 40</td><td>26.00</td></tr><tr><td>41 - 50</td><td>28.00</td></tr><tr><td>More than 50 m³</td><td>30.00</td></tr></table> <p>Notes:</p> <ol style="list-style-type: none">All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.There were 30 new connections in 2014. Price of new domestic connection is NRs25,000 payable prior to connection.The urban poor which comprise 10% of the urban population are allowed to pay the connection fee for community taps for a period of up to 12 months.			Category	All Users	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	200.00	COMMODITY CHARGE		Consumption (m ³)	(NRs/m ³)	11 - 20	22.00	21 - 30	24.00	31 - 40	26.00	41 - 50	28.00	More than 50 m ³	30.00
Category	All Users																						
MINIMUM CHARGE	(NRs)																						
(First 10 m ³ or less)	200.00																						
COMMODITY CHARGE																							
Consumption (m ³)	(NRs/m ³)																						
11 - 20	22.00																						
21 - 30	24.00																						
31 - 40	26.00																						
41 - 50	28.00																						
More than 50 m ³	30.00																						
Priority Need of Utility	1. Transmission line protection.	2. Development of better treatment system.	3. Development of water testing laboratory.																				
Consumer Service	Average monthly consumption is about 25.9 m ³ per connection. The water bill averages NRs624.98 per month per connection. Water is available 24 hours a day to most users in the wet months and 12 hours a day in the dry months. Average pressure at the tap is 9 meters. Applicants have to wait for 7 days for new connections to be made. Connection fee is paid all at the start. All 365 water samples taken during the year passed the residual chlorine test. There were 1,460 consumer complaints recorded and also 1,460 leaks repaired during the year. Consumers can complain in person at the water utility office or by letter and telephone. The service provider provides community taps to the urban poor with connections fees paid by installment.																						
Performance Highlights	BWSUA provides water at 77 lpcd to its consumers for an average of 12-24 hours per day to 64.9% of the population in its service area. NRW of 4.4% is second lowest but with production not metered although consumption is 100% metered, NRW is at best an estimate. Financial management is good with third lowest operating ratio of 0.48 and accounts receivable equivalent of 0.6 month although collection efficiency of 94.9% could still be improved. Average tariff of NRs24.13/m ³ is in the top quartile and is more than enough for revenues to cover O&M expenses and debt service adequately. Staff/1000 connections ratio at 8.7 is much higher than average. There might be a need to increase tariff to develop new sources for BWSUA to increase water provided to its consumers and increase its coverage. BWSUA also needs to meter its production to have a more accurate determination of its water losses. It can provide training for its staff to improve their productivity.																						

BENI WATER SUPPLYPopulation: 12,000 ¹**Production/Distribution**

Average Daily Production	820 m ³ /d
Groundwater	Nil
Surface Water	100%
Treatment Type ²	Sedimentation & slow sand filter
Total water storage	505 m ³
Service Area ³	5.0 sq km
Distribution pipes	12.5 km

Service Connections

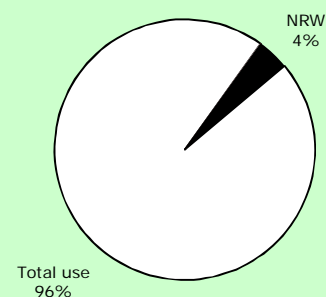
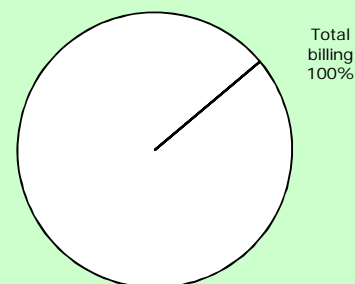
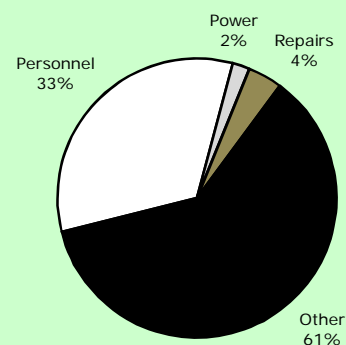
House (11.5 persons/HC)	855
Public Tap	0
Commercial	0
Industrial	0
Institutional	65
Other	0
Total	920

Service Indicators

Service Coverage ⁴	64.9%
Water availability/day	12 hours in dry months 24 hours in wet months
Per Capita Consumption ⁵	77 l/c/d
Average Tariff	NRs24.13/m ³

Efficiency Indicators

Non-Revenue Water ⁶	4.4%
Unit Production Cost	NRs11.17/m ³
Operating Ratio ⁷	0.48
Accounts Receivable	0.6 month
Staff/1,000 Connections	8.7

Notes:¹ The population is for the present area served by the utility.² All 365 water samples taken in 2014 passed the residual chlorine test.³ This is also the total area of responsibility.⁴ The population not served by the water utility draw water from springs, rivers and streams.⁵ This is based on the total consumption from all connections.⁶ There were 1,460 leaks reported in 2014 while 30 meters were either repaired or replaced.⁷ Operating cost does not include debt service of NRs1,950,000.⁸ No breakdown of total use or total billing was available.⁹ Other costs include chemicals, transport and miscellaneous expenses.**Data as of 2014.****Annual Water Use⁸**
299,160 m³**Annual Water Billings⁸**
NRs6,899,768**Annual O&M Costs⁹**
NRs3,342,128

Water Utility	BESISHAHAR WATER SUPPLY AND SANITATION USERS COMMITTEE																		
	Address : Ward No.10, Besishahar Municipality, Lamjung District Telephone : +977 066 520073 Fax : none E-mail : none Head : Krishna Bahadur Adhikari, Chairperson																		
	Besishahar Water Supply and Sanitation Users Committee (BWSUC) became fully operational in 1995. It is legally registered with the District Water Resource Committee. BWSUC is responsible for water supply for 5 urban and rural wards of Besishahar which has a total population of 30,000 people. Its present service area has a population density of 1,400 persons/km ² . It draws water from 7 spring and river intakes and one well. It has a master development plan covering 2013 to 2018 and a water safety plan in place since 2008. The service provider has an annual report for 2013 that is available to the public as well as an audited financial report for the same year. Two personnel attended training in 2014. BWSUC has a partially developed management information system. Its billing operations are computerized.																		
Mission Statement	No mission statement.																		
General Data About Water Utility	Connections : 2,352 Staff : 18 Annual O&M Costs : NRs3,423,000 Annual Collections : NRs3,916,000 Annual Billings : NRs3,743,000 Annual Capital Expenditure : NRs3,450,000 Other Revenues: NRs554,000 Average capital expenditure/connection/year: NRs1,466.84																		
	Besishahar Water Supply and Sanitation Users Committee received financial and technical assistance from WSSDO for water system upgrade and extension and from non government organization CHOICE Nepal (Humanitarian Service and Inter-Culture Exchange Centre Nepal) for water tank construction.																		
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>Household</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>50.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>11 - 20</td><td>7.00</td></tr><tr><td>21 - 40</td><td>9.00</td></tr><tr><td>More than 40 m³</td><td>10.00</td></tr></table> <p>Notes:</p> <ol style="list-style-type: none">1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.2. There were 95 new connections in 2014. Price of new domestic connection is NRs4,230 payable prior to connection.3. The urban poor which comprise 5% of the service area population are exempted from deposit and fitting charges when connecting to the water service provider.			Category	Household	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	50.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	11 - 20	7.00	21 - 40	9.00	More than 40 m ³	10.00
Category	Household																		
MINIMUM CHARGE	(NRs)																		
(First 10 m ³ or less)	50.00																		
ADDITIONAL CHARGE																			
Consumption (m ³)	(NRs/m ³)																		
11 - 20	7.00																		
21 - 40	9.00																		
More than 40 m ³	10.00																		
Priority Need of Utility	1. Continuous water supply. 2. Water treatment facilities. 3. Source development.																		
Consumer Service	Average monthly consumption is about 20.3 m ³ per connection. The water bill averages NRs132.62 per month per connection. Water is available for 6 hours a day to most users in the dry months and 24 hours a day in the wet months. Average pressure at the tap is 10 meters. Applicants have to wait for 7 days for new connections to be made. Connection fee is paid all at the start. No water samples were taken in 2014 for residual chlorine test. There were 1,236 consumer complaints reported and 1,106 leaks were repaired during the year. Consumers can complain in person at the water service provider's office or by telephone. The service provider gives the urban poor exemption from deposit and fitting charges when connecting.																		
Performance Highlights	BWSUC provides water at only 56 lpcd to its consumers for an average of 6 hours per day during the dry months and 24 hours per day in the wet months to 93.3% of the population in its service area. NRW of 10% is tenth lowest with consumption fully metered but not for production rendering the NRW value unreliable. Financial management is good with operating ratio of 0.91, accounts receivable equivalent of 0.4 month and collection efficiency of 104.6% which indicates collection of past arrears. Average tariff of NRs6.54/m ³ is fifth lowest but is enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 7.7 is a little higher than the average. BWSUC may have to develop new sources to increase water supply to customers with some increase in tariff. The service provider should consider buying a power generator to extend water availability to more than 6 hours per day. Such additional tariff can be afforded considering its present low tariff. It should also meter its production to have a better determination of its losses. BWSUC should monitor residual chlorine to check on the effectiveness of its disinfection measures.																		

BESISHAHAR WATER SUPPLY

Population: 28,000 ¹

Production/Distribution

Average Daily Production	1,742 m ³ /d
Groundwater	11%
Surface Water	89%
Treatment Type ²	Sedimentation & filtration
Total water storage	1,100 m ³
Service Area ³	20.0 sq km
Distribution pipes	45.0 km

Service Connections

House (12 persons/HC)	2,300
Public Tap	0
Commercial	0
Industrial	0
Institutional	52
Other	0
Total	2,352

Service Indicators

Service Coverage ⁴	93.3%
Water availability/day	6 hours in dry months 24 hours in wet months
Per Capita Consumption ⁵	56 l/c/d
Average Tariff	NRs6.54/m ³

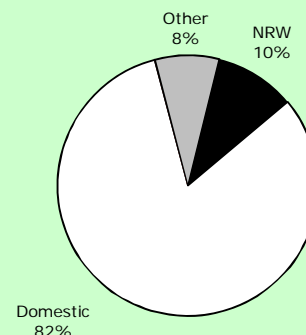
Efficiency Indicators

Non-Revenue Water ⁶	10.0%
Unit Production Cost	NRs5.38/m ³
Operating Ratio ⁷	0.91
Accounts Receivable	0.4 month
Staff/1,000 Connections	7.7

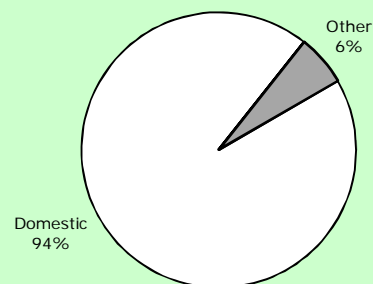
Notes:

- ¹ The population is for the present area served by the utility.
- ² There were no water samples taken in 2014 for residual chlorine test.
- ³ Total area of responsibility is 30.0 sq. km.
- ⁴ The population not served by the water utility draw water from springs, rivers and streams.
- ⁵ This is for total consumption from domestic and institutional connections.
- ⁶ There were 1,106 leaks repaired in 2014 while 1,036 meters were either replaced or repaired.
- ⁷ Operating cost does not include debt service of NRs.917,000.
- ⁸ Other use and billing are for institutional connections.
- ⁹ Other costs are for chemical expenses.

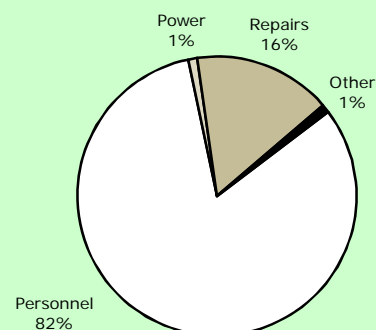
Data as of 2014.



Annual Water Use⁸
635,820 m³



Annual Water Billings⁸
NRs3,743,000



Annual O&M Costs⁹
NRs3,423,000

Water Utility	NEPAL WATER SUPPLY CORPORATION, BHADRAPUR																				
	Address : Ward No.15, Sagarsava, Bhadrapur Municipality, Jhapa District Telephone : +977 023 520893 Fax : +977 023 456376 E-mail : none Head : Abadh Narayan Sah, Officer-in-charge																				
	Nepal Water Supply Corporation, Bhadrapur (NWSC Bhadrapur) became fully operational in 1999. It is legally registered under the NWSC Act 1989. NWSC Bhadrapur is responsible for water supply for 15 urban wards of Bhadrapur and Maheshpur VDC which have a total population of 59,320 people. Its present service area has a population density of 2,044 persons/km ² . It draws water from 5 tubewells of which 4 are operational. It has no master development plan and no water safety plan in place. The service provider has a annual report for 2012 and an audited financial report for the same year. Two personnel attended training from NWSC head office in 2014. NWSC Bhadrapur has a well developed management information system. None of its operations is computerized.																				
Mission Statement	No mission statement.																				
General Data About Water Utility	<table><tr><td>Connections</td><td>: 1,682</td><td></td></tr><tr><td>Staff</td><td>: 20</td><td></td></tr><tr><td>Annual O&M Costs</td><td>: NRs10,364,000</td><td></td></tr><tr><td>Annual Collections</td><td>: NRs 5,573,356</td><td>Other Revenues: Nil</td></tr><tr><td>Annual Billings</td><td>: NRs 5,117,314</td><td></td></tr><tr><td>Annual Capital Expenditure</td><td>: Nil</td><td>Average capital expenditure/connection/year: Nil</td></tr></table> <p>Nepal Water Supply Corporation, Bhadrapur has not received any form of assistance from the government, NGOs or funding agencies in the past year.</p>			Connections	: 1,682		Staff	: 20		Annual O&M Costs	: NRs10,364,000		Annual Collections	: NRs 5,573,356	Other Revenues: Nil	Annual Billings	: NRs 5,117,314		Annual Capital Expenditure	: Nil	Average capital expenditure/connection/year: Nil
Connections	: 1,682																				
Staff	: 20																				
Annual O&M Costs	: NRs10,364,000																				
Annual Collections	: NRs 5,573,356	Other Revenues: Nil																			
Annual Billings	: NRs 5,117,314																				
Annual Capital Expenditure	: Nil	Average capital expenditure/connection/year: Nil																			
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>All Users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>50.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>More than 10 m³</td><td>15.00</td></tr><tr><td colspan="2">Unmetered connections pay a flat rate of NRs360 per month</td></tr></table> <p>Notes:</p> <ol style="list-style-type: none">1. All consumers pay on metered use or flat rate. Consumers are billed monthly. Water bills are paid at the water service provider's office.2. There were 82 new connections in 2014. Price of new domestic connection is NRs4,155 payable prior to connection.3. The urban poor which comprise 10% of the service area population are not given any special tariff rates or connection charges.			Category	All Users	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	50.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	More than 10 m ³	15.00	Unmetered connections pay a flat rate of NRs360 per month					
Category	All Users																				
MINIMUM CHARGE	(NRs)																				
(First 10 m ³ or less)	50.00																				
ADDITIONAL CHARGE																					
Consumption (m ³)	(NRs/m ³)																				
More than 10 m ³	15.00																				
Unmetered connections pay a flat rate of NRs360 per month																					
Priority Need of Utility	<table><tr><td>1. Construction of overhead tank.</td><td>2. Pipe network extension.</td><td>3. Relocation of pipelines from center to side of roads.</td></tr></table>			1. Construction of overhead tank.	2. Pipe network extension.	3. Relocation of pipelines from center to side of roads.															
1. Construction of overhead tank.	2. Pipe network extension.	3. Relocation of pipelines from center to side of roads.																			
Consumer Service	Average monthly consumption is about 23.7 m ³ per connection. The water bill averages NRs253.53 per month per connection. Water is available for 8 hours a day to most users during both dry months and wet months. Average pressure at the tap is 12 meters. Applicants have to wait for 3 days for new connections to be made. Connection fee is paid all at the start. All 300 water samples taken during the year passed the residual chlorine test. There were 360 consumer complaints recorded and 200 leaks repaired during the year. Consumers can complain in person at the water utility office, by telephone or by writing a letter. The service provider has no policy for providing water to the urban poor.																				
Performance Highlights	NWSC Bhadrapur provides water at 64 lpcd to its consumers for an average of 8 hours per day throughout the year to 92.9% of the population in its service area. NRW of 1.4% is the lowest but with production not metered and consumption only 89.2% metered rendering the NRW value unreliable. Financial management needs improvement with fourth highest operating ratio of 2.03, accounts receivable equivalent of 2.0 months and collection efficiency of 108.9% which suggests collection of past arrears. Average tariff of NRs10.72/m ³ is almost among the lowest quartile and not enough to cover O&M expenses. Staff/1000 connections ratio at 11.9 is sixth highest. The service provider may have to develop new sources since the per capita consumption is very close to the limit of production. There is room for tariff increase with the present low average tariff and the need to cover O&M expenses. NWSC Bhadrapur should fully meter its production and all connections to better determine its NRW.																				

BHADRAPUR WATER SUPPLY

Population: 20,440 ¹

Production/Distribution

Average Daily Production	1,326 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Sedimentation, aeration & filters
Total water storage	800 m ³
Service Area ³	10.0 sq km
Distribution pipes	41.5 km

Service Connections

House (5 persons/HC)	1,573
Public Tap (7 persons/PT)	47
Commercial	0
Industrial	0
Institutional	62
Other	0
Total	1,682

Service Indicators

Service Coverage ⁴	92.9%
Water availability/day	8 hours in dry months 8 hours in wet months
Per Capita Consumption ⁵	64 l/c/d
Average Tariff	NRs10.72/m ³

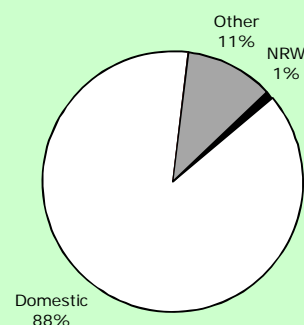
Efficiency Indicators

Non-Revenue Water ⁶	1.4%
Unit Production Cost	NRs21.41/m ³
Operating Ratio ⁷	2.03
Accounts Receivable	2.0 months
Staff/1,000 Connections	11.9

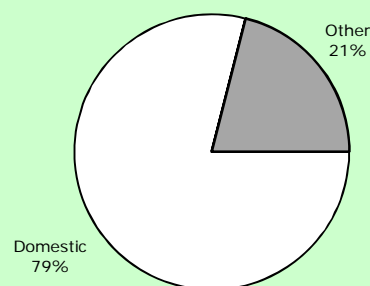
Notes:

- ¹ The population is for the present area served by the utility.
- ² All of 300 water samples taken in 2014 passed the residual chlorine test.
- ³ The present service area expanded from the original area of responsibility of 5.0 sq. km.
- ⁴ The population not served by the water utility draw water from tubewells.
- ⁵ This is based on total consumption and population served by all connections.
- ⁶ There were 200 leaks repaired in 2014 while 300 meters were either replaced or repaired.
- ⁷ The water service provider has no debt service in 2014.
- ⁸ Other use and billing are for institutional connections.
- ⁹ Other costs are for chemical expenses.

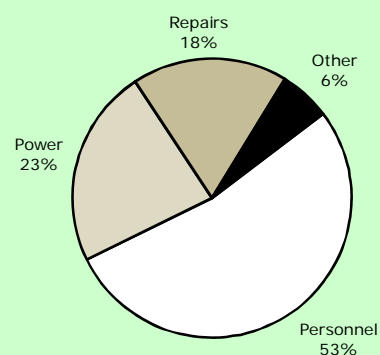
Data as of 2014.



Annual Water Use⁸
483,990 m³



Annual Water Billings⁸
NRs5,117,314



Annual O&M Costs⁹
NRs10,364,000

Water Utility	NEPAL WATER SUPPLY CORPORATION, BHAIRAHAWA														
	Address : Ward No.8, Lumbini Road, Siddhartnagar Municipality, Rupandehi District Telephone : +977 071 520628 Fax : +977 071 520737 E-mail : nwscbhairahawa@gmail.com Head : Deepak Jyoti Shakkya, Technical Officer														
	Nepal Water Supply Corporation, Bhairahawa (NWSC Bhairahawa) became fully operational in 1988. It is legally registered under the NWSC Act 1989. NWSC Bhairahawa is responsible for water supply for 13 urban wards of Siddhartnagar (formerly Bhairahawa) Municipality which have a total population of 108,558 people. Its present service area has a population density of 4,871 persons/km ² . It draws water from 6 tubewells of which 4 are operational. It has no master development plan and no water safety plan in place. The service provider has a annual report for 2013 and an audited financial report for the same year. No personnel attended training in 2014. NWSC Bhairahawa has no management information system. None of its operations is computerized.														
Mission Statement	Yearly target – billing, collection and household connections.														
General Data About Water Utility	Connections : 3,537 Staff : 27 Annual O&M Costs : NRs10,003,522 Annual Collections : NRs 8,206,831 Annual Billings : NRs 9,299,745 Annual Capital Expenditure : NRs 4,700,000 Other Revenues: NRs43,500 Average capital expenditure/connection/year: NRs1,328.81 Nepal Water Supply Corporation, Bhairahawa received financial assistance from the government through the Ministry of Urban Development for source development, production and distribution.														
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>All Users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>110.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>More than 10 m³</td><td>25.00</td></tr></table> <p>Unmetered connections pay a flat rate of NRs560 per month. Public taps at NRs1,600 per month by the municipality</p> <p>Notes:</p> <ol style="list-style-type: none">All consumers pay on metered use or flat rate. Consumers are billed monthly. Water bills are paid at the water service provider's office.There were 209 new connections in 2014. Price of new domestic connection is NRs1,980 payable prior to connection.The urban poor which comprise 47% of the service area population are get water from public taps as recommended by the municipal government.			Category	All Users	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	110.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	More than 10 m ³	25.00
Category	All Users														
MINIMUM CHARGE	(NRs)														
(First 10 m ³ or less)	110.00														
ADDITIONAL CHARGE															
Consumption (m ³)	(NRs/m ³)														
More than 10 m ³	25.00														
Priority Need of Utility	1. Construction of overhead tank. 2. Pipe network extension. 3. Construction of new bore well.														
Consumer Service	Average monthly consumption is about 23.8 m ³ per connection. The water bill averages NRs219.11 per month per connection. Water is available for 7 hours a day to most users during the dry months and 10 hours a day in the wet months. Average pressure at the tap is 7 meters. Applicants have to wait for 4 days for new connections to be made. Connection fee is paid all at the start. All 4 water samples taken during the year passed the residual chlorine test. There were 55 consumer complaints recorded and only 3 leaks repaired during the year. Consumers can complain in person at the water utility office, by telephone or by writing a letter. The service provider provides water to the urban poor through public taps under the municipal government.														
Performance Highlights	NWSC Bhairahawa provides water at 75 lpcd to its consumers for an average of 7 hours per day in the dry months and 10 hours per day in the wet months to 34.2% of the population in its service area. NRW of 15% is lower than average with production not metered and consumption 99.3% metered rendering its value unreliable. Financial management needs improvement with operating ratio at 1.08, accounts receivable equivalent of 7 months and collection efficiency of 88.2%. Average tariff of NRs9.22/m ³ is tenth lowest and not enough to cover O&M expenses. Staff/1000 connections ratio at 7.6 is higher than the average. Tariff need to be increased for revenues to cover O&M expenses unless expenses can be reduced. Bills need to be collected as well in a timely manner. The service provider may have to develop new sources to increase coverage and to provide adequate supply to customers. Testing for residual chlorine should be adequate in frequency and number of samples. NWSC Bhairahawa should send more staff to training courses to develop their capacity. Production should be metered.														

BHAIRAHAWA WATER SUPPLY

Population: 97,423 ¹

Production/Distribution

Average Daily Production	3,250 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Chlorination
Total water storage	765 m ³
Service Area ³	20.0 sq km
Distribution pipes	50.0 km

Service Connections

House (10 persons/HC)	3,506
Public Tap (50 persons/PT)	23
Commercial	0
Industrial	0
Institutional	8
Other	0
Total	3,537

Service Indicators

Service Coverage ⁴	34.2%
Water availability/day	7 hours in dry months 10 hours in wet months
Per Capita Consumption ⁵	75 l/c/d
Average Tariff	NRs9.22/m ³

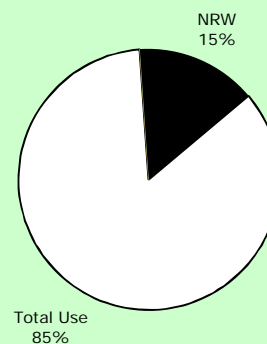
Efficiency Indicators

Non-Revenue Water ⁶	15.0%
Unit Production Cost	NRs8.43/m ³
Operating Ratio ⁷	1.08
Accounts Receivable	7.0 months
Staff/1,000 Connections	7.6

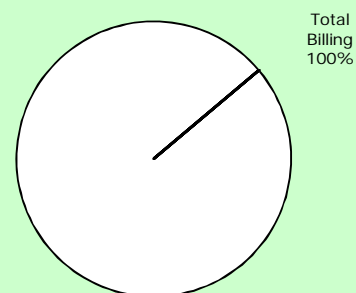
Notes:

- ¹ The population is for the present area served by the utility.
- ² All 4 water samples taken in 2014 passed the residual chlorine test.
- ³ Total area of responsibility is 30.0 sq. km.
- ⁴ The population not served by the water utility draw water from tubewells.
- ⁵ This is for total consumption from all domestic and institutional connection users.
- ⁶ There were only 3 leaks repaired in 2014 while only 3 meters were either replaced or repaired.
- ⁷ The water service provider has no debt service in 2014.
- ⁸ There are no breakdown of use and billing according to connection categories.
- ⁹ Other costs include chemical and miscellaneous expenses.

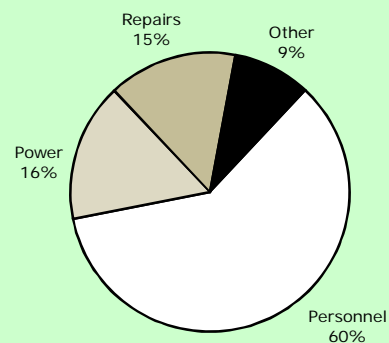
Data as of 2014.



Annual Water Use⁸
1,186,250 m³



Annual Water Billings⁸
NRs9,299,745



Annual O&M Costs⁹
NRs10,003,522

Water Utility	BHARATPUR WATER SUPPLY MANAGEMENT BOARD																							
	Address : Ward No.12, Bhojad, Bharatpur Municipality, Chitwan District Telephone : +977 056 524916 Fax : none E-mail : info@bwsmb.org.np Head : Shalik Ram Paudel, Executive Director																							
	Bharatpur Water Supply Management Board (BWSMB) became fully operational in 2010. It is legally registered with the government under its own formation order. BWSMB is responsible for water supply for 14 urban and rural wards of Bharatpur which has a total population of 130,000 people. Its present service area has a population density of 2,500 persons/km ² . It draws water from 19 wells all of which are operational. It has no master development plan but it has a water safety plan in place since 2012. The service provider has an annual report for 2013 that is available to the public as well as an audited financial report for the same year. Fifteen personnel attended internal training funded by the board in 2014. BWSMB has a well developed management information system. Its billing and accounting operations are computerized.																							
Mission Statement	No mission statement.																							
General Data About Water Utility	Connections : 16,000 Staff : 48 Annual O&M Costs : NRs32,899,160 Annual Collections : NRs40,719,127 Annual Billings : NRs43,104,684 Annual Capital Expenditure : NRs16,446,435 Other Revenues: NRs14,958,125 Average capital expenditure/connection/year: NRs1,027.90 Bharatpur Water Supply Management Board received financial assistance from Bharatpur Municipal government, WSSDO Chitwan, non government organization CHOICE Nepal (Humanitarian Service and Inter-Culture Exchange Centre Nepal) for reservoir and bore well development.																							
Tariff Structure	<div>(Used in 2014)</div> <table><tr><th>Category</th><th>Household</th><th>Commercial/Industrial/ Institutional</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>100.00</td><td>135.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td><td>(NRs/m³)</td></tr><tr><td>More than 10 m³</td><td>18.00</td><td>20.00</td></tr><tr><td colspan="3">Unmetered house connections pay flat rate of NRs810 per connection per month</td></tr></table> <div>Notes: 1. All consumers pay on metered use or flat rate. Consumers are billed monthly. Water bills are paid at the water service provider's office. 2. There were 1,635 new connections in 2014. Price of new domestic connection is NRs4,000 payable prior to connection. 3. The urban poor which comprise 5% of the service area population get a 50% discount on connection charges.</div>			Category	Household	Commercial/Industrial/ Institutional	MINIMUM CHARGE	(NRs)	(NRs)	(First 10 m ³ or less)	100.00	135.00	ADDITIONAL CHARGE			Consumption (m ³)	(NRs/m ³)	(NRs/m ³)	More than 10 m ³	18.00	20.00	Unmetered house connections pay flat rate of NRs810 per connection per month		
Category	Household	Commercial/Industrial/ Institutional																						
MINIMUM CHARGE	(NRs)	(NRs)																						
(First 10 m ³ or less)	100.00	135.00																						
ADDITIONAL CHARGE																								
Consumption (m ³)	(NRs/m ³)	(NRs/m ³)																						
More than 10 m ³	18.00	20.00																						
Unmetered house connections pay flat rate of NRs810 per connection per month																								
Priority Need of Utility	1. New source development. 2. Distribution network. 3. Additional reservoir.																							
Consumer Service	Average monthly consumption is about 21.0 m ³ per connection. The water bill averages NRs224.50 per month per connection. Water is available 8 hours a day to most users in the dry months and 11 hours a day in the wet months. Average pressure at the tap is 8 meters. Applicants have to wait for 3 days for new connections to be made. Connection fee is paid all at the start. Of 180 water samples taken in 2014, half passed the residual chlorine test. There were 1,325 consumer complaints reported and 865 leaks repaired during the year. Consumers can complain in person at the water service provider's office, by telephone or by writing a letter. The service provider gives a 50% discount on connection charges to the urban poor.																							
Performance Highlights	BWSMB provides water at 110 lpcd to its consumers for an average of 8 hours per day in the dry months and 11 hours per day in the wet months to 76.9% of the population in its service area. NRW of 26.3% is higher than the average with consumption 96.9% metered but none for production rendering the NRW value unreliable. Operating ratio is good at 0.76, but accounts receivable equivalent of 2.7 months and collection efficiency of 94.5% need improvement. Average tariff of NRs10.69/m ³ is at the bottom quartile but is more than enough for revenues to cover O&M costs. Staff/1000 connections ratio is good at 3.0, the fourth lowest. While providing more than adequate water to consumers, BWSMB may need to develop new sources to increase expand coverage. The service provider should collect all bills in a timely manner. It should also meter its production to have a better determination of its losses. BWSMB should be mindful of the residual chlorine content of the water it is distributing. Other areas for improvement are reduction of NRW and longer water availability.																							

BHARATPUR WATER SUPPLY

Population: 100,000 ¹

Production/Distribution

Average Daily Production	14,992 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Sedimentation & aeration
Treated water storage	3,950 m ³
Service Area ³	40.0 sq km
Distribution pipes	400.0 km

Service Connections

House (6.25 persons/HC)	15,495
Public Tap (10 persons/PT)	5
Commercial*	500
Industrial	0
Institutional	0
Other	0
Total	16,000

* Includes industrial and institutional

Service Indicators

Service Coverage ⁴	76.9%
Water availability/day	8 hours in dry months 11 hours in wet months
Per Capita Consumption ⁵	110 l/c/d
Average Tariff	NRs10.69/m ³

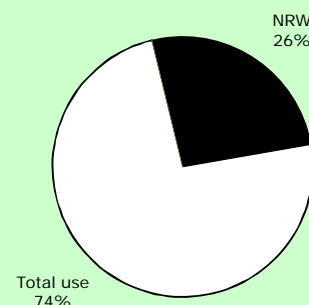
Efficiency Indicators

Non-Revenue Water ⁶	26.3%
Unit Production Cost	NRs6.01/m ³
Operating Ratio ⁷	0.76
Accounts Receivable	2.7 months
Staff/1,000 Connections	3.0

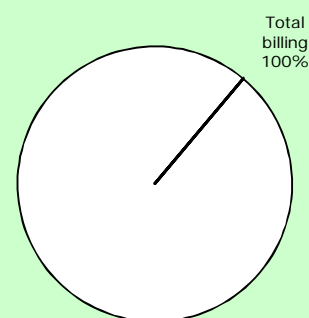
Notes:

- ¹ The population is for the present area served by the utility.
- ² Of 180 water samples taken in 2014, 90 passed the residual chlorine test.
- ³ This is also the total area of responsibility.
- ⁴ The population not served by the water utility draw water from other piped water service providers, tubewells and dug wells.
- ⁵ This is for total consumption for all types of connections.
- ⁶ There were 865 leaks repaired in 2014 while 1,749 meters were either replaced or repaired.
- ⁷ The water service provider had no debt service in 2014.
- ⁸ No breakdown of use and billing according to type of connection was made available.
- ⁹ Other costs include chemical and miscellaneous expenses.

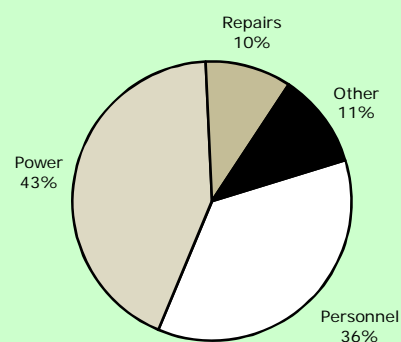
Data as of 2014.



Annual Water Use⁸
5,472,000 m³



Annual Water Billings⁸
NRs43,104,684



Annual O&M Costs⁹
NRs32,899,160

Water Utility	BHIMAD WATER SUPPLY AND SANITATION USERS COMMITTEE																																											
	Address : Ward No.1, Sajhachowk, Bhimad Municipality, Tanahu District Telephone : +977 065 572 066 Fax : none E-mail : bikram_lamsal@yahoo.com Head : Kaji Man Shrestha, Chairman																																											
	Bhimad Water Supply and Sanitation Users Committee (BWSUC) became fully operational in 1999. It is legally registered with the District Water Resource Committee. BWSUC is responsible for water supply for parts of two urban and rural wards of Bhimad VDC which has a total population of 6,252 people. Its present service area has a population density of 2,647 persons/km ² . It draws water from two intakes from river and spring sources. It has a master development plan covering 2009 to 2019 but no water safety plan in place. The service provider has an annual report for 2013 that is available to the public as well as an audited financial report for 2014. None of the service provider's personnel attended training in 2014. BWSUC has a well developed management information system. Its billing, accounting and pumping operations are computerized.																																											
Mission Statement	No mission statement.																																											
General Data About Water Utility	Connections : 1,156 Staff : 5 Annual O&M Costs : NRs1,347,819 Annual Collections : NRs1,879,509 Annual Billings : NRs2,011,024 Annual Capital Expenditure : NRs1,597,652 Other Revenues: NRs1,412,574 Average capital expenditure/connection/year: NRs1,382.05 Bhimad Water Supply and Sanitation Users Committee received financial and technical assistance from Bhimad municipal government and WSSDO.																																											
Tariff Structure	(Used in 2014) <table><tr><th colspan="2">Category</th><th colspan="2">All Users</th></tr><tr><td colspan="4">MINIMUM CHARGE</td></tr><tr><td colspan="2">(First 5 m³ or less)</td><td colspan="2">NRs50.00</td></tr><tr><td colspan="4">ADDITIONAL CHARGE</td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>6 - 10 m³</td><td>15.00</td><td>26 - 30 m³</td><td>50.00</td></tr><tr><td>11 - 15 m³</td><td>20.00</td><td>31 - 40 m³</td><td>75.00</td></tr><tr><td>16 - 20 m³</td><td>30.00</td><td>41 - 50 m³</td><td>85.00</td></tr><tr><td>21 - 25 m³</td><td>40.00</td><td>More than 50 m³</td><td>100.00</td></tr><tr><td></td><td></td><td></td><td></td></tr></table> Notes: 1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office. 2. There were 67 new connections in 2014. Price of new domestic connection is NRs20,000 payable prior to connection. 3. The urban poor which comprise 8% of the service area population have no special rates for connection fee or tariff charges.				Category		All Users		MINIMUM CHARGE				(First 5 m ³ or less)		NRs50.00		ADDITIONAL CHARGE				Consumption (m ³)	(NRs/m ³)	Consumption (m ³)	(NRs/m ³)	6 - 10 m ³	15.00	26 - 30 m ³	50.00	11 - 15 m ³	20.00	31 - 40 m ³	75.00	16 - 20 m ³	30.00	41 - 50 m ³	85.00	21 - 25 m ³	40.00	More than 50 m ³	100.00				
Category		All Users																																										
MINIMUM CHARGE																																												
(First 5 m ³ or less)		NRs50.00																																										
ADDITIONAL CHARGE																																												
Consumption (m ³)	(NRs/m ³)	Consumption (m ³)	(NRs/m ³)																																									
6 - 10 m ³	15.00	26 - 30 m ³	50.00																																									
11 - 15 m ³	20.00	31 - 40 m ³	75.00																																									
16 - 20 m ³	30.00	41 - 50 m ³	85.00																																									
21 - 25 m ³	40.00	More than 50 m ³	100.00																																									
Priority Need of Utility	1. Water treatment system. 2. Increase water availability to 3 hours per day. 3. Develop new water sources.																																											
Consumer Service	Average monthly consumption is about 8.6 m ³ per connection. The water bill averages NRs144.97 per month per connection. Water is available 1 hour a day to most users in the dry months and 2 hours a day during the wet months. Average pressure at the tap is 1 meter. Applicants have to wait for about a week for new connections to be made. Connection fee is paid all at the start. No residual chlorine test was conducted in 2014. There were 268 consumer complaints recorded and the same number of leaks was reported repaired during the year. Consumers can complain by telephone or by writing a letter. The service provider has no policy for providing water to the urban poor.																																											
Performance Highlights	BWSUC provides water at 55 lpcd to its consumers for averages of 1 hour per day in the dry months and 2 hours per day in the wet months, among the first and third lowest, respectively, to 94.8% of the population in its service area. NRW of 12.6% is almost at the lowest quartile but production is not metered and consumption is 99% metered making the NRW value an estimate at best. Financial management is good with operating ratio of 0.67, accounts receivable equivalent of 0.8 month and collection efficiency of 93.5%. Average tariff of NRs16.81/m ³ is just below the top quartile, enough to provide revenues to cover O&M expenses. Staff/1000 connections ratio at 4.3 is good at the top quartile. BWSUC will have to develop new sources to increase water availability to more than 2hours per day and the amount of water provided to its consumers. Full metering of its production and all connections will give a more accurate determination of its losses. It may also want to consider sending its staff to training to develop their capabilities. Monitoring of residual chlorine will allow the service provider determine the effectiveness of its disinfection treatment.																																											

BHIMAD WATER SUPPLY

Population: 6,088 ¹

Production/Distribution

Average Daily Production	375 m ³ /d
Groundwater	Nil
Surface Water	100%
Treatment Type ²	Chlorination
Raw water storage	155 m ³
Service Area ³	2.3 sq km
Distribution pipes	6.0 km

Service Connections

House (5.3 persons/HC)	1,147
Public Tap	0
Commercial	3
Industrial	0
Institutional	6
Other	
Total	1,156

Service Indicators

Service Coverage ⁴	94.8%
Water availability/day	1.0 hour in dry months 2.0 hours in wet months
Per Capita Consumption ⁵	55 l/c/d
Average Tariff	NRs16.81/m ³

Efficiency Indicators

Non-Revenue Water ⁶	12.6%
Unit Production Cost	NRs9.85/m ³
Operating Ratio ⁷	0.67
Accounts Receivable	0.8 month
Staff/1,000 Connections	4.3

Notes:

¹ The population is for the present area served by the utility.

² No water samples were taken in 2014 for residual chlorine test.

³ Total area of responsibility is 2.5 sq. km.

⁴ The population not served by the water utility draw water from other piped water service providers, springs, rivers and streams.

⁵ This is based on the total consumption for all types of connections.

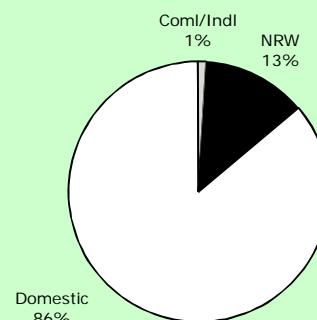
⁶ There were 268 leaks repaired in 2014 while 23 meters were either replaced or repaired.

⁷ The water service provider had no debt service in 2014.

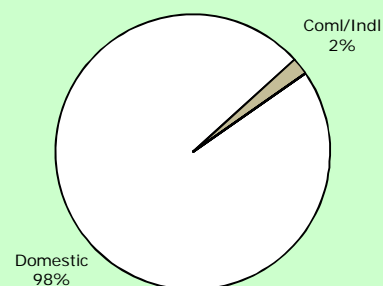
⁸ Use and billing for institutional connections are no charged.

⁹ Other costs include transport and miscellaneous expenses.

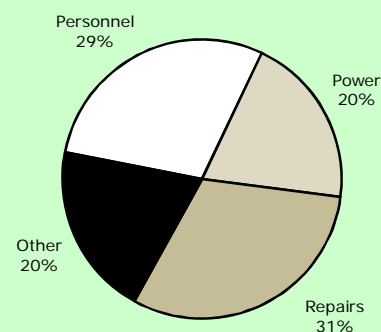
Data as of 2014.



Annual Water Use⁸
136,800 m³



Annual Water Billings⁸
NRs2,011,024



Annual O&M Costs⁹
NRs1,347,819

Water Utility	BRIHAT BIJUWAR SMALL TOWN DRINKING WATER USERS AND SANITATION ASSOCIATION																		
	Address : Bijuwar-4, Gegra, Pyuthan Municipality, Pyuthan District Telephone : +977 086 460166 Fax : none E-mail : none Head : Mohan Singh Bista, Chairperson																		
	Brihat Bijuwar Small Town Drinking Water Users and Sanitation Association (BBSTDWUSA) became fully operational in 2007. It is legally registered with the District Water Resource Committee. BBSTDWUSA is responsible for water supply for 10 urban and rural wards of Pyuthan which has a total population of 20,000 people. Its present service area has a population density of 1,500 persons/km ² . It draws water from two wells. It has no master development plan but it has a water safety plan in place since 2014. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. One personnel attended training in 2014. BBSTDWUSA has a partially developed management information system while its pumping operations are computerized.																		
Mission Statement	No mission statement.																		
General Data About Water Utility	Connections : 977 Staff : 12 Annual O&M Costs : NRs3,116,419 Annual Collections : NRs3,662,743 Annual Billings : NRs3,587,875 Annual Capital Expenditure : Nil Other Revenues: NRs1,404,677 Average capital expenditure/connection/year: Nil Brihat Bijuwar Small Town Drinking Water Users and Sanitation Association received technical assistance from the government through WSSDO in the past year.																		
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>Household</th></tr><tr><th>MINIMUM CHARGE</th><th>(NRs)</th></tr><tr><td>(First 10 m³ or less)</td><td>250.00</td></tr><tr><th>ADDITIONAL CHARGE</th><th></th></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>11 - 15</td><td>30.00</td></tr><tr><td>16 - 20</td><td>40.00</td></tr><tr><td>More than 20 m³</td><td>60.00</td></tr></table> <p>Notes:</p> <ol style="list-style-type: none">1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.2. There were 45 new connections in 2014. Price of new domestic connection is NRs20,000 payable prior to connection.3. The urban poor which comprise 25% of the service area population are not given any special tariff rates or connection charges.			Category	Household	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	250.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	11 - 15	30.00	16 - 20	40.00	More than 20 m ³	60.00
Category	Household																		
MINIMUM CHARGE	(NRs)																		
(First 10 m ³ or less)	250.00																		
ADDITIONAL CHARGE																			
Consumption (m ³)	(NRs/m ³)																		
11 - 15	30.00																		
16 - 20	40.00																		
More than 20 m ³	60.00																		
Priority Need of Utility	1. Install pressure filter and operate chlorine dosing unit. 2. Explore new sources of water. 3. Maintenance and expansion of pipeline.																		
Consumer Service	Average monthly consumption is about 12.2 m ³ per connection. The water bill averages NRs306.03 per month per connection. Water is available for only 1.5 hours a day to most users in the dry months and 2 hours a day in the wet months. Average pressure at the tap is 12 meters. Applicants have to wait for 2 days for new connections to be made. Connection fee is paid all at the start. Half of 4 water samples taken in 2014 passed the residual chlorine test. No data on consumer complaints were reported but 240 leaks were repaired during the year. Consumers can complain in person at the water service provider's office, by telephone or by writing a letter. The service provider has no policy for providing water for the urban poor.																		
Performance Highlights	BBSTDWUSA provides water at only 33 lpcd to its consumers, the fourth lowest, for an average of 1.5 - 2 hours per day during the dry and wet months, respectively, to 60% of the population in its service area. NRW of 34.5% is in the bottom quartile with consumption fully metered but not for production rendering the NRW value unreliable. Financial management is good with operating ratio of 0.87, accounts receivable equivalent of 0.3 month and collection efficiency of 102.1%. Average tariff of NRs25.00/m ³ is sixth highest; enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 12.3 is fifth highest. BBSTDWUSA has to do more for its customers by developing new sources to increase water supply to them and expand coverage to others. The service provider could extend water availability by investing in power generators. It should also meter its production to have a better determination of its losses to address it properly. BBSTDWUSA should send more staff to training courses and monitor residual chlorine with more samples tested according to national drinking water standards.																		

BIJUWAR WATER SUPPLYPopulation: 12,000 ¹**Production/Distribution**

Average Daily Production	600 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Chlorination
Raw water storage	596 m ³
Service Area ³	8.0 sq km
Distribution pipes	46.0 km

Service Connections

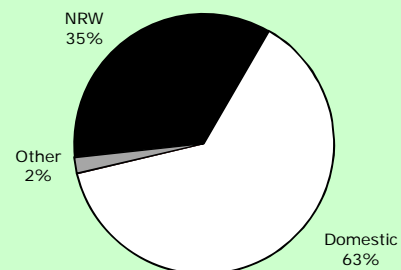
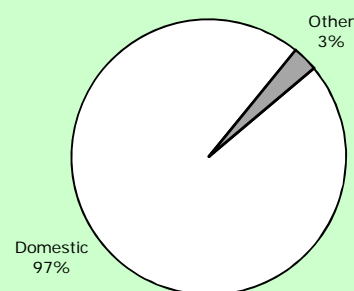
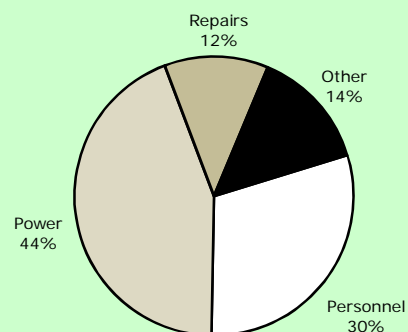
House (7 persons/HC)	943
Public Tap (in public toilets)	2
Commercial	0
Industrial	0
Institutional	32
Other	0
Total	977

Service Indicators

Service Coverage ⁴	60.0%
Water availability/day	1.5 hours in dry months 2.0 hours in wet months
Per Capita Consumption ⁵	33 l/c/d
Average Tariff	NRs25.00/m ³

Efficiency Indicators

Non-Revenue Water ⁶	34.5%
Unit Production Cost	NRs14.23/m ³
Operating Ratio ⁷	0.87
Accounts Receivable	0.3 month
Staff/1,000 Connections	12.3

Notes:¹ The population is for the present area served by the utility.² Of 4 water samples taken in 2014, only 2 passed the residual chlorine test.³ This is also the total area of responsibility.⁴ The population not served by the water utility draw water from other piped water service providers, tubewells, dug wells, springs, rivers and streams.⁵ This is for total consumption for all types of connections.⁶ There were 240 leaks repaired in 2014 while only 13 meters were either replaced or repaired.⁷ Operating cost does not include debt service of NRs 1,000,000⁸ Other use and billing are for institutional connections.⁹ Other costs are for miscellaneous expenses.**Data as of 2014.****Annual Water Use⁸**
219,000 m³**Annual Water Billings⁸**
NRs3,587,875**Annual O&M Costs⁹**
NRs3,116,419

Utility Profile

118 *Nepal Water Service Providers Data Book, 2070 – 2071 (2013-2014)*

BUDHABARE WATER SUPPLY

Population: 15,000 ¹

Production/Distribution

Average Daily Production	1,220 m ³ /d
Groundwater	84%
Surface Water	16%
Treatment Type ²	Filtration
Total water storage	975 m ³
Service Area ³	25.7 sq km
Distribution pipes	144.0 km

Service Connections

House (6 persons/HC)	2,500
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	2,500

Service Indicators

Service Coverage ⁴	49.4%
Water availability/day	12 hours in dry months 14 hours in wet months
Per Capita Consumption ⁵	62 l/c/d
Average Tariff	NRs14.50/m ³

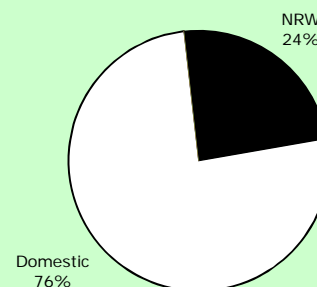
Efficiency Indicators

Non-Revenue Water ⁶	24.3%
Unit Production Cost	NRs15.45/m ³
Operating Ratio ⁷	1.41
Accounts Receivable	2.7 months
Staff/1,000 Connections	4.0

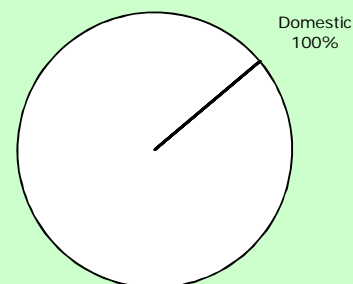
Notes:

- ¹ The population is for the present area served by the utility.
- ² Only one water sample was taken in 2014 for residual chlorine test and result was not obtained.
- ³ This is also the total area of responsibility.
- ⁴ The population not served by the water utility draw water from other piped water service providers, tubewells, dug wells, springs, rivers and streams.
- ⁵ This is for total consumption from all types of connections.
- ⁶ There were 475 leaks repaired in 2014 while 95 meters were either replaced or repaired.
- ⁷ Operating cost does not include debt service of NRs.2,484,387
- ⁸ Use and billing include institutional connections included under house connections.
- ⁹ Other costs are for miscellaneous expenses.

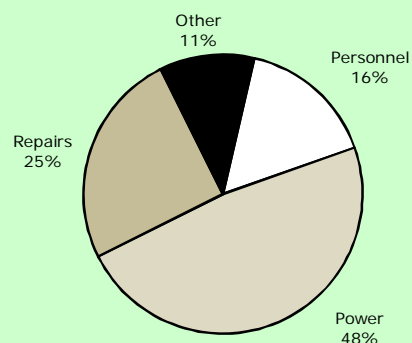
Data as of 2014.



Annual Water Use⁸
445,300 m³



Annual Water Billings⁸
NRs4,886,213



Annual O&M Costs⁹
NRs6,878,819

Water Utility	CHAINPUR DRINKING WATER AND SANITATION CONSUMER COMMITTEE														
	Address : Ward No.4, Chainpur, Jayaprithivi Municipality, Bajhang District Telephone : +977 092 421281 Fax : none E-mail : none Head : Lokendra Bahadur Bist, Chairperson														
	Chainpur Drinking Water and Sanitation Consumer Committee (CDWSCC) became fully operational in 2008. It is legally registered with the District Water Resource Committee. CDWSCC is responsible for water supply for 4 urban wards of Jayaprithivi which has a total population of 10,000 people. No data was given for the size of its present service area. It draws water from 3 spring intakes of which 2 are operational. It has a master development plan covering 2015 to 2016 and a water safety plan in place since 2014. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. No personnel attended training in 2014. CDWSCC has no management information system and none of its operations is computerized.														
Mission Statement	Supply water for all households, seeking larger spring, and constructing 100 m ³ tank up to 2016.														
General Data About Water Utility	Connections : 450 Staff : 4 Annual O&M Costs : NRs974,308 Annual Collections : NRs857,200 Annual Billings : NRs845,400 Annual Capital Expenditure : Nil Chainpur Drinking Water and Sanitation Consumer Committee received financial assistance from the Bajhang District Development Committee in 2014.														
	Other Revenues: NRs150,000 Average capital expenditure/connection/year: Nil														
Tariff Structure	(Used in 2014)														
	<table><tr><th>Category</th><th>House</th><th>Institutions</th></tr><tr><th>FLAT RATE</th><th>(NRs/year)</th><th>(NRs/year)</th></tr><tr><td>All connections are unmetered</td><td>150.00</td><td>400.00</td></tr><tr><td colspan="3">Public taps provide free water</td></tr></table>			Category	House	Institutions	FLAT RATE	(NRs/year)	(NRs/year)	All connections are unmetered	150.00	400.00	Public taps provide free water		
Category	House	Institutions													
FLAT RATE	(NRs/year)	(NRs/year)													
All connections are unmetered	150.00	400.00													
Public taps provide free water															
	Notes: 1. All consumers pay an annual flat rate. Consumers are billed monthly. Water bills are paid at the water service provider's office. 2. There were 30 new connections in 2014. Price of new domestic connection is NRs10,000 payable prior to connection. 3. The urban poor which comprise 8% of the service area population have no special tariff rates or connection charges.														
Priority Need of Utility	1. Water supply for all households. 2. Provide water supply for more time to users. 3. Propagate leak awareness among users.														
Consumer Service	Average monthly consumption is about 12.8 m ³ per connection. The water bill averages NRs156.56 per month per connection. Water is available for only 1 hour a day to most users in the dry months and only 2 hours a day in the wet months. Average pressure at the tap is 3 meters. Applicants have to wait for one month for new connections to be made. Connection fee is paid all at the start. No water samples were taken in 2014 for residual chlorine test. There were 20 consumer complaints reported and 84 leaks repaired during the year. Consumers can complain in person at the water service provider's office or by telephone. The service provider has no specific policy for providing water to the urban poor.														
Performance Highlights	CDWSCC provides water at only 37 lpcd to its consumers for an average of only 1 hour per day in the dry months and 2 hours per day in the wet months to 52% of the population in its service area. NRW of 5% should be good at third lowest but consumption and production are not metered at all rendering the NRW value questionable. Operating ratio at 1.15 and accounts receivable equivalent of 2.1 months are both in the bottom quartile although collection efficiency at 101.4% is good with some efforts in collecting past arrears. Average tariff of NRs12.19/m ³ is not enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 8.9 is at the bottom quartile. CDWSCC should prioritize development of new sources to increase water supply to customers and expand coverage and procuring power generators to extend water availability to more than 2 hours per day. Tariffs may have to be raised for revenues to cover O&M expenses and bills should be collected in time. It should fully meter its production and all connections to have a better determination of its losses. CDWSCC should send its staff to training courses to develop their capacity and monitor residual chlorine to check on effectiveness of its disinfection measures.														

CHAINPUR WATER SUPPLY

Population: no data

Production/Distribution

Average Daily Production	200 m ³ /d
Groundwater	Nil
Surface Water	100%
Treatment Type ²	Chlorination
Raw water storage	108 m ³
Service Area ³	no data
Distribution pipes	9.4 km

Service Connections

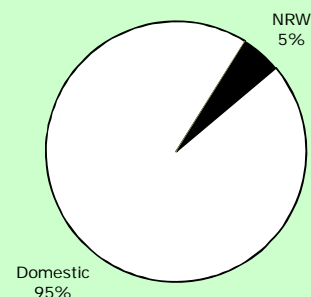
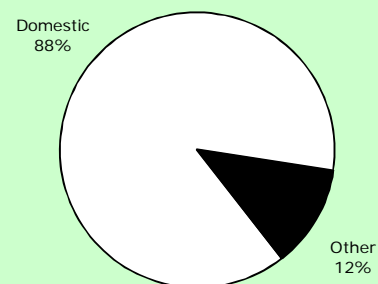
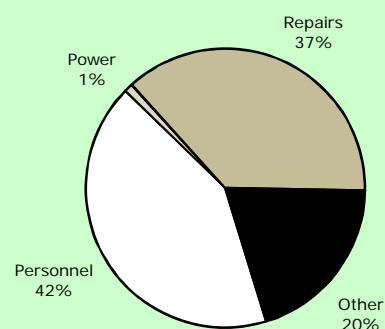
House (10 persons/HC)	411
Public Tap (40 persons/PT)	17
Commercial	0
Industrial	0
Institutional	22
Other	0
Total	450

Service Indicators

Service Coverage ⁴	52.0%
Water availability/day	1 hours in dry months 2 hours in wet months
Per Capita Consumption ⁵	37 l/c/d
Average Tariff	NRs12.20/m ³

Efficiency Indicators

Non-Revenue Water ⁶	5.0%
Unit Production Cost	NRs13.35/m ³
Operating Ratio ⁷	1.15
Accounts Receivable	2.1 months
Staff/1,000 Connections	8.9

Notes:¹ The water service provider has no data on the population in its service area.² No water samples were taken in 2014 for residual chlorine test.³ No data was available for the present service area.⁴ The population not served by the water utility draw water from other piped water service providers, springs, rivers and streams.⁵ This is for total consumption for all types of connections which are mostly domestic.⁶ There were 84 leaks repaired in 2014 while no meters were either replaced or repaired with no metering.⁷ The water service provider had no debt service in 2014.⁸ NRW based on estimated production and consumption with no meters.⁹ Other billing is for institutional connections.¹⁰ Other costs include transport, chemicals and miscellaneous expenses.**Data as of 2014.****Annual Water Use⁸**
73,000 m³**Annual Water Billings⁹**
NRs845,400**Annual O&M Costs¹⁰**
NRs974,308

Water Utility	CHANDRAGADHI WATER USERS AND SANITATION COMMITTEE																																
	Address : Ward No.7, Chandragadhi, Jhapa District Telephone : +977 023 455796 Fax : none E-mail : none Head : Ambar Bahadur Karki, Chairman																																
Chandragadhi Water Users and Sanitation Committee (CWUSC) became fully operational in 2001. It is legally registered with the District Water Resource Committee. CWUSC is responsible for water supply for 11 urban and rural wards of Bhadrapur and Chandragadhi which has a total population of 18,092 people. Its present service area has a population density of 449 persons/km ² . It draws water from 3 tubewells. CWUSC has no master development plan nor does it have a water safety plan in place. The service provider has an annual report for 2013 that is available to the public as well as an audited financial report for the same year. None of its personnel attended training in 2014. CWUSC has no management information system. Billing operations is computerized.																																	
Mission Statement	No mission statement.																																
General Data About Water Utility	Connections : 2,688 Staff : 14 Annual O&M Costs : NRs6,405,270 Annual Collections : NRs8,461,136 Annual Billings : NRs8,279,494 Annual Capital Expenditure : NRs2,429,520 Other Revenues: NRs2,949,835 Average capital expenditure/connection/year: NRs903.84 Chandragadhi Water Users and Sanitation Committee received technical assistance from the government through WSSDO for technical support.																																
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>Household</th><th>Institutional</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td><td>(NRs)</td></tr><tr><td>(First 8 m³ or less)</td><td>80.00</td><td>110.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td><td>(NRs/m³)</td></tr><tr><td>9 - 15 m³</td><td>12.00</td><td>15.00</td></tr><tr><td>16 - 25 m³</td><td>15.00</td><td>18.00</td></tr><tr><td>26 - 40 m³</td><td>17.00</td><td>21.00</td></tr><tr><td>41 - 55 m³</td><td>19.00</td><td>24.00</td></tr><tr><td>More than 55 m³</td><td>22.00</td><td>28.00</td></tr></table> <p>Notes:</p> <p>1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid to the bill collector.</p> <p>2. There were 155 new connections in 2014. Price of new domestic connection is NRs6,330 payable prior to connection.</p> <p>3. The urban poor which comprise 10% of the service area population have been provided with community taps with minimal charges for their use.</p>			Category	Household	Institutional	MINIMUM CHARGE	(NRs)	(NRs)	(First 8 m ³ or less)	80.00	110.00	ADDITIONAL CHARGE			Consumption (m ³)	(NRs/m ³)	(NRs/m ³)	9 - 15 m ³	12.00	15.00	16 - 25 m ³	15.00	18.00	26 - 40 m ³	17.00	21.00	41 - 55 m ³	19.00	24.00	More than 55 m ³	22.00	28.00
Category	Household	Institutional																															
MINIMUM CHARGE	(NRs)	(NRs)																															
(First 8 m ³ or less)	80.00	110.00																															
ADDITIONAL CHARGE																																	
Consumption (m ³)	(NRs/m ³)	(NRs/m ³)																															
9 - 15 m ³	12.00	15.00																															
16 - 25 m ³	15.00	18.00																															
26 - 40 m ³	17.00	21.00																															
41 - 55 m ³	19.00	24.00																															
More than 55 m ³	22.00	28.00																															
Priority Need of Utility	1. Rehabilitation of old water supply pipelines. 2. Construction of additional overhead tank. 3. Train staff on new technology for operations.																																
Consumer Service	Average monthly consumption is about 17.1 m ³ per connection. The water bill averages NRs256.68 per month per connection. Water is available 12 hours a day to most users in both the dry months and the wet months. The average pressure at the tap is 4 meters. Applicants have to wait for about 3 days for new connections to be made. Connection fee is paid all at the start. No residual chlorine test was conducted in 2014. There were 250 consumer complaints recorded while 260 leaks were repaired during the year. Consumers complain in person at the water utility office, by telephone or by writing a letter. The service provider has made community taps available to the urban poor.																																
Performance Highlights	CWUSC provides water at 96 lpcd to its consumers for an average of 12 hours per day during both dry and wet months to 86.8% of the population in its service area. NRW of 41.9% is the fourth highest with production not metered although consumption is almost totally metered at 99.9% making NRW an estimate at best. Financial management is good with operating ratio of 0.77, accounts receivable equivalent of 0.5 month and collection efficiency of 102.2% which may include collection of some past arrears. Average tariff of NRs15.05/m ³ is just above average but enough to cover O&M expenses. Staff/1000 connections ratio at 5.2 is better than the average. CWUSC's priority should be reduction of its water losses. Additional revenues from NRW reduction can be used to expand services to more people and provide longer hours of supply. It should also meter its production to have a more accurate determination of NRW to be able to address it well. The service provider should also invest on training its staff for greater productivity and efficiency. Monitoring of residual chlorine can help CWUSC check on the effectiveness of its disinfection measures.																																

CHANDRAGADHI WATER SUPPLYPopulation: 16,169 ¹**Production/Distribution**

Average Daily Production	2,592 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Rapid sand filter
Treated water storage	810 m ³
Service Area ³	36.0 sq km
Distribution pipes	72.0 km

Service Connections

House (6 persons/HC)	2,586
Public Tap (50 persons/PT)	4
Commercial	0
Industrial	0
Institutional	98
Other	0
Total	2,688

Service Indicators

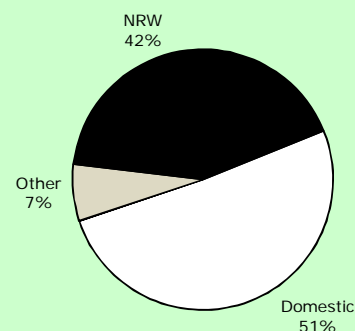
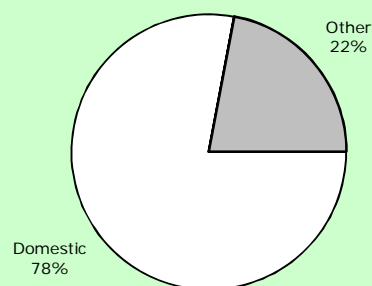
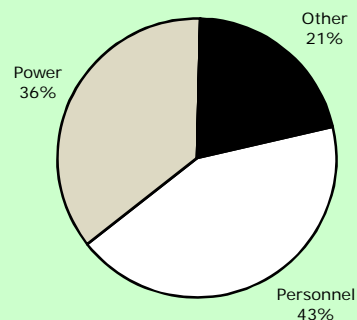
Service Coverage ⁴	86.8%
Water availability/day	12 hours in dry months 12 hours in wet months
Per Capita Consumption ⁵	96 l/c/d
Average Tariff	NRs15.05/m ³

Efficiency Indicators

Non-Revenue Water ⁶	41.9%
Unit Production Cost	NRs6.77/m ³
Operating Ratio ⁷	0.77
Accounts Receivable	0.5 month
Staff/1,000 Connections	5.2

Notes:

- ¹ The population is for the present area served by the utility.
- ² No water samples were taken in 2014 for residual chlorine test.
- ³ The total area of responsibility is 57.0 sq km.
- ⁴ The population not served by the water utility draw water from tubewells and dug wells.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 260 leaks repaired in 2014 while 345 meters were either replaced or repaired.
- ⁷ The water service provider has no data on debt service in 2014.
- ⁸ Other use and billing are for institutional consumption.
- ⁹ Other costs are for miscellaneous expenses.

Data as of 2014.**Annual Water Use⁸**
946,080 m³**Annual Water Billings⁸**
NRs8,279,494**Annual O&M Costs⁹**
NRs6,405,270

Water Utility	DAMAK WATER SUPPLY AND SANITATION USERS COMMITTEE																																
	Address : Ward No.1, Damak, Jhapa District Telephone : +977 023 580 039 Fax : +977 023 581 059 E-mail : none Head : Pashupati Raj Gautam, Chairman																																
	Damak Water Supply and Sanitation Users Committee (DWSUC) became operational in 1994. It was legally registered with the District Water Resource Committee in 2006. DWSUC is responsible for water supply for 10 urban wards of Damak municipality which has a total population of 49,046 people. Its present service area has a population density of 2,776 persons/km ² . The DWSUA draws water from 4 tubewells. It has a master development plan covering 2011 to 2015 but no water safety plan in place. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. Four personnel attended training funded from its operating budget in 2014. DWSUC has a partly developed management information system. Its accounting operations is computerized.																																
Mission Statement	Make the system manageable and sustainable.																																
General Data About Water Utility	Connections : 3,835 Staff : 15 Annual O&M Costs : NRs 8,459,180 Annual Collections : NRs12,614,815 Annual Billings : NRs12,978,760 Annual Capital Expenditure : NRs40,340,285 Other Revenues: NRs17,296,531 Average capital expenditure/connection/year: NRs10,518.98 Damak Water Supply and Sanitation Users Committee received financial and technical assistance through the SSTWSSP with funding from the Asian Development Bank, the national government and the users committee.																																
Tariff Structure	(Used in 2014) <table><tr><th>Category</th><th>House</th><th>Institution</th></tr><tr><th>Minimum Charge</th><th>NRs</th><th>NRs</th></tr><tr><td>Minimum consumption (m³/month)</td><td>8</td><td>25</td></tr><tr><td>Minimum charge (NRs/month)</td><td>120.00</td><td>120.00</td></tr><tr><th>Additional Charge</th><th>(NRs/m³)</th><th>(NRs/m³)</th></tr><tr><td>Additional charge beyond minimum</td><td></td><td></td></tr><tr><td>9 – 20 m³</td><td>17.00</td><td>-</td></tr><tr><td>21 – 30 m³</td><td>20.00</td><td>20.00</td></tr><tr><td>31 – 50 m³</td><td>24.00</td><td>24.00</td></tr><tr><td>More than 50 m³</td><td>27.00</td><td>27.00</td></tr></table> <div>Notes:<ol style="list-style-type: none">All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the DWSUA office.There were 1,087 new connections in 2014. Price of new domestic connection is NRs15,000 payable prior to connection.While there is no specific policy for serving the urban poor, water from community taps is provided at subsidized rates by the water service provider.</div>			Category	House	Institution	Minimum Charge	NRs	NRs	Minimum consumption (m ³ /month)	8	25	Minimum charge (NRs/month)	120.00	120.00	Additional Charge	(NRs/m ³)	(NRs/m ³)	Additional charge beyond minimum			9 – 20 m ³	17.00	-	21 – 30 m ³	20.00	20.00	31 – 50 m ³	24.00	24.00	More than 50 m ³	27.00	27.00
Category	House	Institution																															
Minimum Charge	NRs	NRs																															
Minimum consumption (m ³ /month)	8	25																															
Minimum charge (NRs/month)	120.00	120.00																															
Additional Charge	(NRs/m ³)	(NRs/m ³)																															
Additional charge beyond minimum																																	
9 – 20 m ³	17.00	-																															
21 – 30 m ³	20.00	20.00																															
31 – 50 m ³	24.00	24.00																															
More than 50 m ³	27.00	27.00																															
Priority Need of Utility	1. Expansion of distribution system. 2. Additional overhead tank. 3. Additional treatment facility.																																
Consumer Service	Average monthly consumption is about 18.5 m ³ per connection. The water bill averages NRs282.02 per month per connection. Water is available at an average of 24 hours a day to the users throughout the year with the use of a 40 kva power generator during load shedding. Average pressure at the tap is 3 - 5 meters. Applicants had to wait for about 15 days for new connections to be made. Connection fee is paid all at the start. Only 2 water samples were taken during the year which both passed the residual chlorine test. There were 528 consumer complaints recorded and the same number of leaks was repaired during the year. Consumers can complain by writing to the water utility office. Community taps with subsidized rates are available for the urban poor.																																
Performance Highlights	DWSUC provides water at 62 lpcd to its consumers for an average of 24 hours per day during both dry and wet months to 76.9% of the population in its service area. NRW of 10.7% is in the top quartile and good with both production and consumption 100% metered. Financial management is good with operating ratio at 0.65 and accounts receivable equivalent of 0.3 month although collection efficiency is 97.2%. Average tariff of NRs15.27/m ³ is a little less than the average but is enough to cover O&M costs. Staff/1000 connections ratio is good at 3.9 which is in the top quartile. A customer service gap is the low coverage and per capita consumption which should be improved. The service provider may have to develop new sources which may require increasing tariff. The service provider should collect and test more water samples for residual chlorine according to the national drinking water standard to check on the effectiveness of its disinfection measures.																																

DAMAK WATER SUPPLYPopulation: 37,728 ¹**Production/Distribution**

Average Daily Production	2,608 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Pressure filter & aeration
Treated water storage	1,350 m ³
Service Area ³	13.6 sq km
Distribution pipes	220.0 km

Service Connections

House (6 persons/HC)	3,731
Public Tap (36 persons/PT)	104
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	3,835

Service Indicators

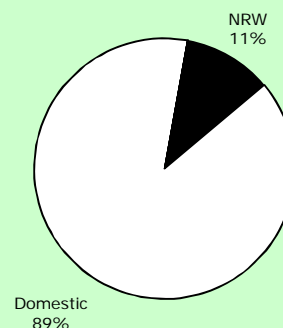
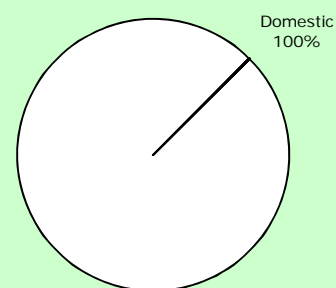
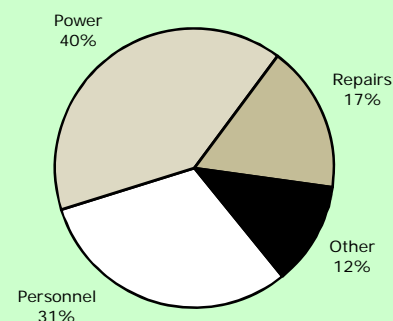
Service Coverage ⁴	76.9%
Water availability/day	24 hours in dry months 24 hours in wet months
Per Capita Consumption ⁵	62 l/c/d
Average Tariff	NRs15.27/m ³

Efficiency Indicators

Non-Revenue Water ⁶	10.7%
Unit Production Cost	NRs8.89/m ³
Operating Ratio ⁷	0.65
Accounts Receivable	0.3 month
Staff/1,000 Connections	3.9

Notes:

- ¹ The population is for the present area served by the utility.
- ² All 2 water samples taken in 2014 passed the residual chlorine test.
- ³ Total area of responsibility is 19.4 sq km.
- ⁴ The population not served by the water utility draw water from tubewells and dug wells.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 528 leaks repaired in 2014 while 181 meters were repaired and 91 replaced.
- ⁷ The water service provider has no debt service.
- ⁸ Total use and billings are from domestic connections.
- ⁹ Other costs include chemicals, transport and miscellaneous expenses.

Data as of 2014.**Annual Water Use⁸**
952,068 m³**Annual Water Billings⁸**
NRs12,978,760**Annual O&M Costs⁹**
NRs8,459,180

Water Utility	DAMAULI WATER SUPPLY AND SANITATION USERS ASSOCIATION																																			
	Address : Ward No.10, Damauli Bazar, Vyas Municipality, Tanahu District Telephone : +977 065 561 808/809 Fax : +977 065 561 808 E-mail : tek_sinjali@yahoo.com Head : Shanti Raman Wagle, Chairperson																																			
	Damauli Water Supply and Sanitation Users Association (DWSSUA) became fully operational in 2008. It is legally registered with the District Water Resources Committee. DWSSUA is responsible for water supply for 4 urban wards of Vyas Municipality which has a total population of 27,000 people. It draws water from Gunadi Spring and Madi River with 3 intakes. It has a master development plan covering 2013 to 2014 and a water safety plan in place since 2010. The service provider has an annual report for 2013 that is available to the public as well as an audited financial report for the same year. Three personnel attended training in 2014. DWSSUA has a partially developed management information system. Only water treatment operation is computerized.																																			
Mission Statement	Water for all in the service area by 2015.																																			
General Data About Water Utility	Connections : 2,514 Staff : 13 Annual O&M Costs : NRs 6,367,610 Annual Collections : NRs10,290,623 Annual Billings : NRs 8,865,071 Annual Capital Expenditure : Nil Other Revenues: NRs1,640,631 Average capital expenditure/connection/year: Nil Damauli Water Supply and Sanitation Users Association received no assistance from the government, non government organization or funding institutions in the past year.																																			
Tariff Structure	(Used in 2014) <table><tr><th>Category</th><th>House</th><th>Commercial/Industrial /Institutional</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td><td>(NRs)</td></tr><tr><td>(First 7 m³ or less)</td><td>120.00</td><td>130.00</td></tr><tr><td>COMMODITY CHARGE</td><td></td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td><td>(NRs/m³)</td></tr><tr><td>8 - 10</td><td>20.00</td><td>25.00</td></tr><tr><td>11 - 15</td><td>30.00</td><td>35.00</td></tr><tr><td>16 - 20</td><td>35.00</td><td>40.00</td></tr><tr><td>21 - 25</td><td>40.00</td><td>45.00</td></tr><tr><td>26 - 30</td><td>45.00</td><td>50.00</td></tr><tr><td>More than 30 m³</td><td>50.00</td><td>55.00</td></tr></table> <p>Notes:</p> <ol style="list-style-type: none">All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.There were 104 new connections in 2014. Price of new domestic connection is NRs10,125 payable prior to connection.The urban poor which comprise 10% of the service area population are given a 59% subsidy on connection charges.			Category	House	Commercial/Industrial /Institutional	MINIMUM CHARGE	(NRs)	(NRs)	(First 7 m ³ or less)	120.00	130.00	COMMODITY CHARGE			Consumption (m ³)	(NRs/m ³)	(NRs/m ³)	8 - 10	20.00	25.00	11 - 15	30.00	35.00	16 - 20	35.00	40.00	21 - 25	40.00	45.00	26 - 30	45.00	50.00	More than 30 m ³	50.00	55.00
Category	House	Commercial/Industrial /Institutional																																		
MINIMUM CHARGE	(NRs)	(NRs)																																		
(First 7 m ³ or less)	120.00	130.00																																		
COMMODITY CHARGE																																				
Consumption (m ³)	(NRs/m ³)	(NRs/m ³)																																		
8 - 10	20.00	25.00																																		
11 - 15	30.00	35.00																																		
16 - 20	35.00	40.00																																		
21 - 25	40.00	45.00																																		
26 - 30	45.00	50.00																																		
More than 30 m ³	50.00	55.00																																		
Priority Need of Utility	1. Safe and sufficient drinking water to be provided 2. Construction of sewerage for healthy environment 3. Provision for a sanitary landfill for solid waste																																			
Consumer Service	Average monthly consumption is about 20.7 m ³ per connection. The water bill averages NRs293.86 per month per connection. Water is available 4 hours a day to most users in the dry months and 6 hours per day in the wet months. Average pressure at the tap is 2 meters. Applicants have to wait for about one month for new connections to be made. Connection fee is paid all at the start. All 12 samples taken during the year passed the residual chlorine test. There were 276 consumer complaints recorded while 276 leaks were repaired during the year. Consumers can complain in person at the water utility office, by telephone or by writing a letter. The service provider provides for a 50% subsidy on connection charges for the poor.																																			
Performance Highlights	DWSSUA provides water at 78 lpcd to its consumers for an average of only 4 - 6 hours per day during the dry and wet months, respectively, to 81.5% of the population in its service area. NRW of 11.2% is in the top quartile although production is not metered and consumption is fully metered making the NRW figure an estimate at best. Financial management is good with operating ratio at 0.72, accounts receivable equivalent of 0.3 month and collection efficiency of 97.6%. Average tariff of NRs14.20/m ³ is just below the average but sufficient enough for revenues to cover O&M costs. Staff/1000 connections ratio at 5.2 is below the average. The service provider may have to buy a backup power generator to provide water at more than 6 hours per day as others have done. DWSSUA also needs to meter its production to have a more accurate determination of NRW. The number of water samples for residual chlorine tests may also have to be increased according to the national drinking water standards. It may also need to invest in training its staff to increase their productivity.																																			

DAMAULI WATER SUPPLY

Population: 22,000 ¹

Production/Distribution

Average Daily Production	1,926 m ³ /d
Groundwater	Nil
Surface Water	100%
Treatment Type ²	Sedimentation & roughing filter
Treated water storage	750 m ³
Service Area ³	not defined
Distribution pipes	35.0 km

Service Connections

House (8 persons/HC)	2,309
Public Tap	0
Commercial	127
Industrial	8
Institutional	70
Other	0
Total	2,514

Service Indicators

Service Coverage ⁴	81.5%
Water availability/day	4 hours in dry months 6 hours in wet months
Per Capita Consumption ⁵	78 l/c/d
Average Tariff	NRs14.20/m ³

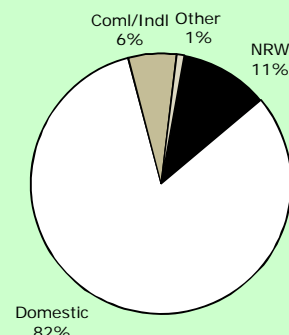
Efficiency Indicators

Non-Revenue Water ⁶	11.2%
Unit Production Cost	NRs9.06/m ³
Operating Ratio ⁷	0.72
Accounts Receivable	0.3 month
Staff/1,000 Connections	5.2

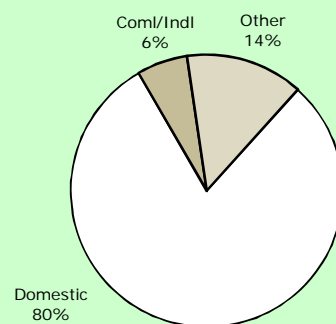
Notes:

- ¹ The population is for the present area served by the utility.
- ² All 12 water samples taken in 2014 passed the residual chlorine test.
- ³ No data were given for the area of responsibility and service area.
- ⁴ The population not served by the water utility draw water from tube wells dug wells, springs, rivers and streams.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 276 leaks repaired in 2014 while 70 meters were either replaced or repaired.
- ⁷ The water service provider has no debt service.
- ⁸ Other use and billing are for institutional connections
- ⁹ Other costs include transport, chemicals and miscellaneous expenses.

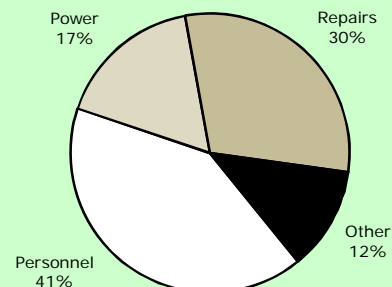
Data as of 2014.



Annual Water Use⁸
703,080 m³



Annual Water Billings⁸
NRs8,865,071



Annual O&M Costs⁹
NRs6,367,610

Water Utility	NEPAL WATER SUPPLY CORPORATION, DHANGADHI														
	Address : Dhangadhi Municipality, Kailali District Telephone : +977 091 523071 Fax : +977 091 524471 E-mail : nwscdhangadhi@gmail.com Head : Shailendra Kumar Shah, Officer-in-charge														
Nepal Water Supply Corporation, Dhangadhi (NWSC Dhangadhi) became fully operational in 1999. It is legally registered under the NWSC Act 1989. NWSC Dhangadhi is responsible for water supply for 6 urban wards of Dhangadhi Municipality which have a total population of 110,000 people. Its present service area has a population density of 3,167 persons/km ² . It draws water from 7 tubewells of which 4 are operational. It has no master development plan but has a water safety plan in place since 2011. The service provider has a annual report for 2014 and an audited financial report for 2013. No personnel attended training in 2014. NWSC Dhangadhi has a well developed management information system. None of its operations is computerized.															
Mission Statement	Equal distribution for all.														
General Data About Water Utility	Connections : 4,267 Staff : 20 Annual O&M Costs : NRs 9,050,000 Annual Collections : NRs 9,160,000 Annual Billings : NRs10,198,000 Annual Capital Expenditure : NRs 3,761,000 Other Revenues: NRs1,457,000 Average capital expenditure/connection/year: NRs881.42														
Nepal Water Supply Corporation, Dhangadhi received no assistance from the government, non government organizations nor funding agencies in the past year.															
Tariff Structure	<p>(Used in 2014)</p> <table><thead><tr><th>Category</th><th>All Users</th></tr></thead><tbody><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>110.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>More than 10 m³</td><td>25.00</td></tr></tbody></table> <p>Unmetered connections pay a flat rate of NRs560 per month.</p> <p>Notes:</p> <ol style="list-style-type: none">1. All consumers pay on metered use or flat rate. Consumers are billed monthly. Water bills are paid at the water service provider's office.2. There were 114 new connections in 2014. Price of new domestic connection is NRs4,200 payable prior to connection.3. The urban poor which comprise 10% of the service area population do not have special tariffs nor connection charges			Category	All Users	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	110.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	More than 10 m ³	25.00
Category	All Users														
MINIMUM CHARGE	(NRs)														
(First 10 m ³ or less)	110.00														
ADDITIONAL CHARGE															
Consumption (m ³)	(NRs/m ³)														
More than 10 m ³	25.00														
Priority Need of Utility	1. Additional water sources. 2. Pipe network extension. 3. Water quality laboratory facilities.														
Consumer Service	Average monthly consumption is about 21.2 m ³ per connection. The water bill averages NRs199.16 per month per connection. Water is available for 11 hours a day to most users during the dry months and 15 hours a day in the wet months. Average pressure at the tap is 3 meters. Applicants have to wait for 7 days for new connections to be made. Connection fee is paid all at the start. No water samples were taken during the year for residual chlorine test due to lack of testing laboratory. There were 80 consumer complaints recorded and 100 leaks repaired during the year. Consumers can complain in person at the water utility office, by telephone, email or by writing a letter. The service provider has no specific policy on providing water to the urban poor.														
Performance Highlights	NWSC Dhangadhi provides water at 66 lpcd to its consumers for an average of 11 hours per day in the dry months and 15 hours per day in the wet months to only 40.9% of the population in its service area. NRW of 21.9% is just above the average with production not metered and consumption 94.4% metered rendering the NRW value questionable. Financial management is mixed with operating ratio at 0.89, accounts receivable equivalent of 1.2 months and collection efficiency of only 89.8%. Average tariff of NRs9.41/m ³ is in the bottom quartile but enough to cover operating expenses. Staff/1000 connections ratio at 4.7 is just below the top quartile. The service provider may have to develop new sources to increase supply to customers and extend services to more people in its service area. Water availability can be increased with a purchase of power generators. These will entail increasing the present tariff. NWSC Dhangadhi should send more staff to training courses to develop their capacity and increase their productivity. It also needs to monitor residual chlorine to check the effectiveness of disinfection.														

DHANGADHI WATER SUPPLY

Population: 57,000 ¹

Production/Distribution

Average Daily Production	3,803 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Chlorination
Raw water storage	380 m ³
Service Area ³	18.0 sq km
Distribution pipes	25.7 km

Service Connections

House (6 persons/HC)	4,124
Public Tap (6.4 persons/PT)	13
Commercial	1
Industrial	0
Institutional	129
Other	0
Total	4,267

Service Indicators

Service Coverage ⁴	40.9%
Water availability/day	11 hours in dry months 15 hours in wet months
Per Capita Consumption ⁵	66 l/c/d
Average Tariff	NRs9.41/m ³

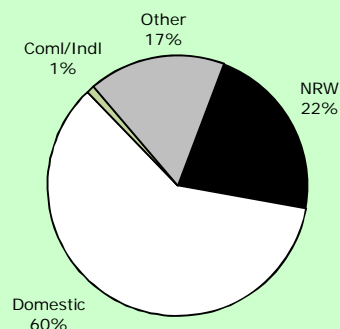
Efficiency Indicators

Non-Revenue Water ⁶	21.9%
Unit Production Cost	NRs6.52/m ³
Operating Ratio ⁷	0.89
Accounts Receivable	1.2 months
Staff/1,000 Connections	4.7

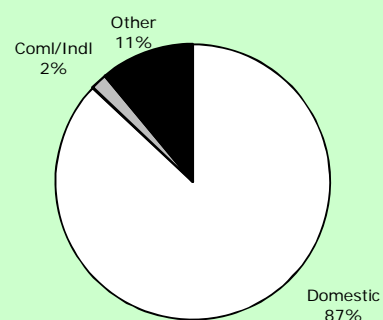
Notes:

- ¹ The population is for the present area served by the utility.
- ² No water samples were taken in 2014 for residual chlorine test.
- ³ The present service area expanded from the original area of responsibility of 4.0 sq. km.
- ⁴ The population not served by the water utility draw water from wells with handpumps.
- ⁵ This is for total consumption from all types of connections.
- ⁶ There were 100 leaks repaired in 2014 while 65 meters were either replaced or repaired.
- ⁷ The water service provider had no debt service in 2014.
- ⁸ Other use and billing are for institutional connections.
- ⁹ Other costs include chemical and miscellaneous expenses.

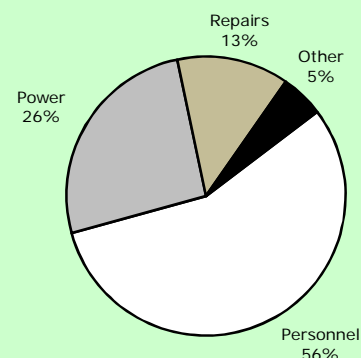
Data as of 2014.



Annual Water Use⁸
1,388,000 m³



Annual Water Billings⁸
NRs10,198,000



Annual O&M Costs
NRs9,050,000

Water Utility	DHULABARI WATER USERS AND SANITATION COMMITTEE																								
	Address : Ward No.1, Dhulabari, Mechinagar Municipality, Jhapa District Telephone : +977 023 560219 Fax : +977 023 560219 E-mail : dhulabarikhanepani@gmail.com Head : Indra Bhadur Budhathoki, Chairperson																								
	Dhulabari Water Users and Sanitation Committee (DWUSC) became fully operational in 1995. It is legally registered with the District Water Resource Committee. DWUSC is responsible for water supply for 7 urban and rural wards of Mechinagar Municipality and Jyamirgadhi and Dhajjan VDCs which has a total population of 25,200 people. No data was given for the size of its present service area. It draws water from a spring intake and a well. It has a master development plan covering 2011 to 2016 and a water safety plan in place since 2011. The service provider has an annual report for 2013 that is available to the public as well as an audited financial report for the same year. No personnel attended training in 2014. DWUSC has a well developed management information system but none of its operations is computerized.																								
Mission Statement	No mission statement.																								
General Data About Water Utility	Connections : 2,977 Staff : 24 Annual O&M Costs : NRs8,778,676 Annual Collections : NRs8,660,500 Annual Billings : NRs7,830,000 Annual Capital Expenditure : NRs 572,584 Other Revenues: NRs1,622,573 Average capital expenditure/connection/year: NRs192.34 Dhulabari Water Users and Sanitation Committee received financial assistance from the government through WSSDO in the past year.																								
Tariff Structure	(Used in 2014) <table><tr><th>Category</th><th>All Users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 8 m³ or less)</td><td>100.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>9 - 15</td><td>12.00</td></tr><tr><td>16 - 30</td><td>15.00</td></tr><tr><td>31 - 50</td><td>18.00</td></tr><tr><td>51 - 70</td><td>19.00</td></tr><tr><td>71 - 100</td><td>21.00</td></tr><tr><td>More than 100 m³</td><td>25.00</td></tr></table> <p>Notes:</p> <ol style="list-style-type: none">1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.2. There were 254 new connections in 2014. Price of new domestic connection is NRs5,075 payable prior to connection.3. The urban poor which comprise 10% of the service area population are provided water through community taps and loan for house connections.			Category	All Users	MINIMUM CHARGE	(NRs)	(First 8 m ³ or less)	100.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	9 - 15	12.00	16 - 30	15.00	31 - 50	18.00	51 - 70	19.00	71 - 100	21.00	More than 100 m ³	25.00
Category	All Users																								
MINIMUM CHARGE	(NRs)																								
(First 8 m ³ or less)	100.00																								
ADDITIONAL CHARGE																									
Consumption (m ³)	(NRs/m ³)																								
9 - 15	12.00																								
16 - 30	15.00																								
31 - 50	18.00																								
51 - 70	19.00																								
71 - 100	21.00																								
More than 100 m ³	25.00																								
Priority Need of Utility	1. Water treatment plant. 2. Construction of overhead tank. 3. Drilling of deep bore well.																								
Consumer Service	Average monthly consumption is about 14.6 m ³ per connection. The water bill averages NRs219.18 per month per connection. Water is available 10 hours a day to most users in the dry months and 24 hours a day in the wet months. Average pressure at the tap is 10 meters. Applicants have to wait for about 7 days for new connections to be made. Connection fee is paid all at the start. All 365 water samples taken in 2014 passed the residual chlorine test. There were 280 consumer complaints reported and 210 leaks repaired during the year. Consumers can complain in person at the water service provider's office, by telephone or by writing a letter. The service provider provides community taps and loans for connection fees to the urban poor.																								
Performance Highlights	DWUSC provides water at 70 lpcd to its consumers for an average of 10 hours per day in the dry months and 24 hours per day in the wet months to 81.3% of the population in its service area. NRW of 5.9% is fifth lowest with consumption 98.7% metered but none for production rendering the NRW value unreliable. Operating ratio at 1.12 and accounts receivable equivalent at 1.3 months both need improvement. Collection efficiency of 110.6% suggests efforts in collecting past arrears. Average tariff of NRs15.00/m ³ while just above the median is not enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 8.1 is higher than the average. DWUSC may have to increase tariffs for revenues to cover O&M expenses. It should spend some effort in collecting bills on time. While amount of per capita supply and coverage is not bad, the service provider can extend water availability with power generators when needed. It should meter its production to have a better determination of its losses. DWUSC should send its staff to training courses to develop their skills and increase their productivity.																								

DHULABARI WATER SUPPLY

Population: 20,500 ¹

Production/Distribution

Average Daily Production	1,521 m ³ /d
Groundwater	32%
Surface Water	68%
Treatment Type ²	Sedimentation & slow sand filter
Treated water storage	1,600 m ³
Service Area ³	no data
Distribution pipes	80.0 km

Service Connections

House (6.8 persons/HC)	2,941
Public Tap (150 persons/PT)	3
Commercial	10
Industrial	6
Institutional	17
Other	0
Total	2,977

Service Indicators

Service Coverage ⁴	81.3%
Water availability/day	10 hours in dry months 24 hours in wet months
Per Capita Consumption ⁵	70 l/c/d
Average Tariff	NRs15.00/m ³

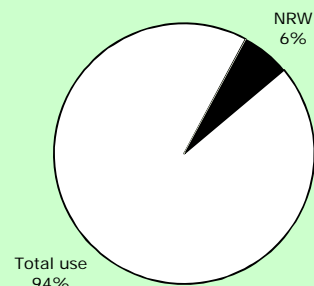
Efficiency Indicators

Non-Revenue Water ⁶	5.9%
Unit Production Cost	NRs15.82/m ³
Operating Ratio ⁷	1.12
Accounts Receivable	1.3 months
Staff/1,000 Connections	8.1

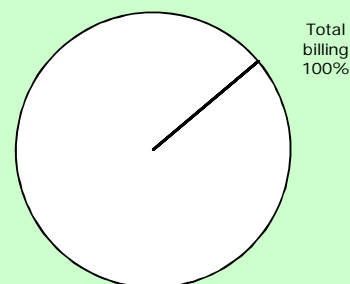
Notes:

- ¹ The population is for the present area served by the utility.
- ² All 365 water samples taken in 2014 passed the residual chlorine test.
- ³ No data is available for the size of the present service area.
- ⁴ The population not served by the water utility draw water from tubewells and dug wells.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 210 leaks repaired in 2014 while 60 meters were either replaced or repaired.
- ⁷ The water service provider had no debt service in 2014.
- ⁸ No breakdown of use by type of connection was provided.
- ⁹ No breakdown according to type of connection could be provided.
- ¹⁰ Other costs include transport, chemical and miscellaneous expenses.

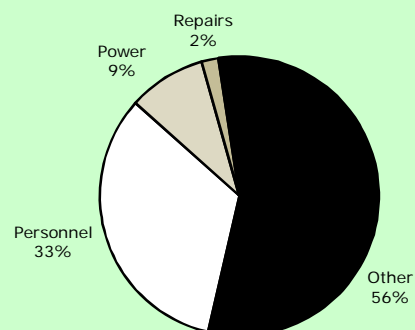
Data as of 2014.



Annual Water Use⁸
555,000 m³



Annual Water Billings⁹
NRs7,830,000



Annual O&M Costs¹⁰
NRs8,778,676

Water Utility	DHULIKHEL DRINKING WATER AND SANITATION USERS COMMITTEE																		
	Address : Ward No.2, Saraswoti Bazar, Dhulikhel Municipality, Kavrepalanchok District Telephone : +977 011 490305 Fax : none E-mail : dsamiti@yahoo.com Head : Raj Kumar Takhanchhe, Chairperson																		
	Dhulikhel Drinking Water and Sanitation Users Committee (DDWSUC) became fully operational in 1992. It is legally registered with the District Water Resource Committee. DDWSUC is responsible for water supply for 9 urban and rural wards of Dhulikhel which has a total population of 19,000 people. Its present service area has a population density of 2,533 persons/km ² . It draws water from a single stream intake. It has no master development plan but has a water safety plan in place since 2009. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. One personnel attended training in 2014. DDWSUC has a partly developed management information system. Its billing system is computerized.																		
Mission Statement	No mission statement.																		
General Data About Water Utility	<div>Connections : 2,008</div> <div>Staff : 20</div> <div>Annual O&M Costs : NRs10,382,159</div> <div>Annual Collections : NRs15,515,928</div> <div>Annual Billings : NRs15,515,928</div> <div>Annual Capital Expenditure : NRs 1,855,087</div> <div>Other Revenues: NRs241,000</div> <div>Average capital expenditure/connection/year: NRs923.85</div> <div>Dhulikhel Drinking Water and Sanitation Users Committee received financial assistance from the government through Dhulikhel Municipality and DWSS (including technical assistance) for distribution, reservoir and water quality and non government organization CHOICE Nepal for distribution works in the past year.</div>																		
Tariff Structure	<div>(Used in 2014)</div> <table><tr><th>Category</th><th>All Users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>160.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>11 - 25</td><td>22.00</td></tr><tr><td>26 - 50</td><td>33.00</td></tr><tr><td>More than 50 m³</td><td>76.00</td></tr></table> <div>Public taps are free of cost from local sources.</div> <div>Notes:<div>1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.</div><div>2. There were 102 new connections in 2014. Price of new domestic connection is NRs8,600 payable prior to connection.</div><div>3. The urban poor which comprise 2% of the service area population are provided free water through public taps from local water sources.</div></div>			Category	All Users	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	160.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	11 - 25	22.00	26 - 50	33.00	More than 50 m ³	76.00
Category	All Users																		
MINIMUM CHARGE	(NRs)																		
(First 10 m ³ or less)	160.00																		
ADDITIONAL CHARGE																			
Consumption (m ³)	(NRs/m ³)																		
11 - 25	22.00																		
26 - 50	33.00																		
More than 50 m ³	76.00																		
Priority Need of Utility	<div>1. Augmentation of existing water source.</div> <div>2. Integration of local water sources into the system.</div> <div>3. Completion of the Kavre Valley Water Supply Project.</div>																		
Consumer Service	Average monthly consumption is about 17.1 m ³ per connection. The water bill averages NRs643.92 per month per connection. Water is available a maximum of 6 hours a day to most users in both dry months and wet months. Average pressure at the tap is 15 meters. Applicants have to wait for about 15 days for new connections to be made. Connection fee is paid all at the start. Of 264 water samples taken in 2014, 185 passed the residual chlorine test. There were 395 consumer complaints reported and 379 leaks repaired during the year. Consumers can complain in person at the water service provider's office, by telephone or by writing a letter. The service provider provides free water from public taps to the urban poor.																		
Performance Highlights	DDWSUC provides water at 61 lpcd to its consumers for an average of 6 hours per day throughout the year to 97.4% of the population in its service area. NRW of 22% is just above the average with consumption 99% metered but not for production rendering the NRW value unreliable. Operating ratio is in the top quartile at 0.67and collection efficiency at 100% is good but accounts receivable equivalent at 1.3 months needs some improvement. Average tariff of NRs37.62/m ³ is second highest which is more than enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 10.0 is in the bottom quartile. DDWSUC's priority should be in increasing supply to its customers and extending water availability which will require additional sources and the use of power generators. It should meter its production to have a better determination of its NRW to properly find ways to reduce it. DDWSUC should send more staff to training courses to develop their capacity and increase their productivity.																		

DHULIKHEL WATER SUPPLY

Population: 19,000 ¹

Production/Distribution

Average Daily Production	1,449 m ³ /d
Groundwater	Nil
Surface Water	100%
Treatment Type ²	Roughing and slow sand filters
Total water storage	1,200 m ³
Service Area ³	7.5 sq km
Distribution pipes	42.0 km

Service Connections

House (8 persons/HC)	1,572
Public Tap (70 persons/PT)	21
Commercial	233
Industrial	0
Institutional	179
Other	3
Total	2,008

Service Indicators

Service Coverage ⁴	97.4%
Water availability/day	6 hours in dry months 6 hours in wet months
Per Capita Consumption ⁵	61 l/c/d
Average Tariff	NRs37.62/m ³

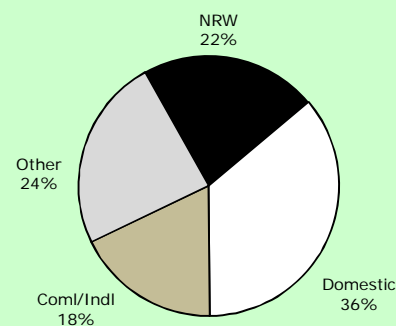
Efficiency Indicators

Non-Revenue Water ⁶	22.0%
Unit Production Cost	NRs19.63/m ³
Operating Ratio ⁷	0.67
Accounts Receivable	1.3 months
Staff/1,000 Connections	10.0

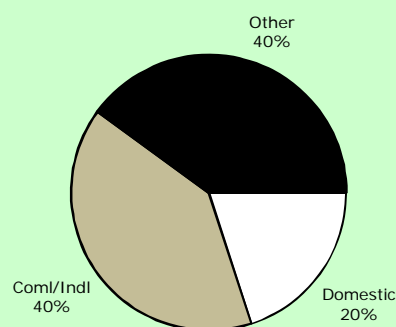
Notes:

- ¹ The population is for the present area served by the utility.
- ² Of 264 water samples taken in 2014, 185 passed the residual chlorine test.
- ³ The present service area expanded from the original area of responsibility of 5.25 sq. km.
- ⁴ The population not served by the water utility draw water from other small municipal water schemes, springs, rivers and springs.
- ⁵ This is based on total consumption from all types of connections.
- ⁶ There were 379 leaks repaired in 2014 while 72 meters were either replaced or repaired.
- ⁷ The water service provider had no debt service in 2014.
- ⁸ Other use and billing are for institutional connections including a hospital and a picnic spot.
- ⁹ Power is from another source and provided free. Other costs include transport, chemicals and miscellaneous expenses.

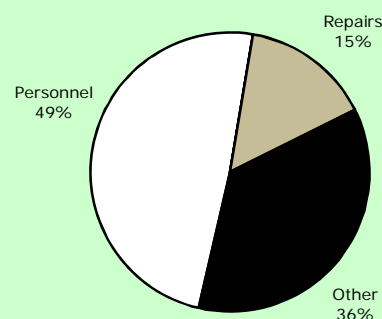
Data as of 2014.



Annual Water Use⁸
528,768 m³



Annual Water Billings⁸
NRs15,515,928



Annual O&M Costs⁹
NRs10,382,159

134 *Nepal Water Service Providers Data Book, 2070 – 2071 (2013-2014)*

DOLAKHA WATER SUPPLY

Population: 1,400 ¹

Production/Distribution

Average Daily Production	178 m ³ /d
Groundwater	Nil
Surface Water	100%
Treatment Type ²	Chlorination
Raw water storage	180 m ³
Service Area ³	1.6 sq km
Distribution pipes	3.0 km

Service Connections

House (7 persons/HC)	131
Public Tap (20 persons/PT)	20
Commercial	11
Industrial	0
Institutional	6
Other	0
Total	168

Service Indicators

Service Coverage ⁴	80.0%
Water availability/day	2 hours in dry months 4 hours in wet months
Per Capita Consumption ⁵	120 l/c/d
Average Tariff	NRs3.81/m ³

Efficiency Indicators

Non-Revenue Water ⁶	5.1%
Unit Production Cost	NRs2.80/m ³
Operating Ratio ⁷	0.77
Accounts Receivable	1.8 months
Staff/1,000 Connections	29.8

Notes:

¹ The population is for the present area served by the utility.

² No water samples were taken in 2014 for residual chlorine test.

³ Total area of responsibility is 2.5 sq. km.

⁴ The population not served by the water utility draw water from springs, rivers and streams.

⁵ This is based on total consumption for all types of connections.

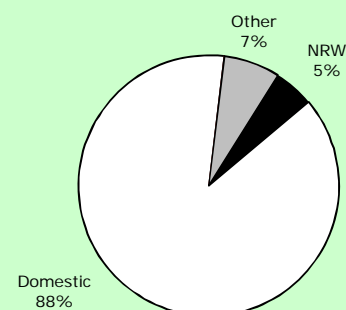
⁶ There were 9 leaks repaired in 2014. There are no metered connections.

⁷ The water service provider had no debt service in 2014.

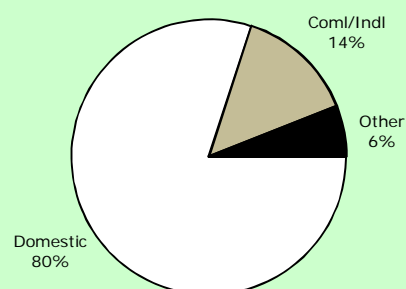
⁸ Other use and billing are for institutional connections. No commercial use data was provided.

⁹ Other costs are for miscellaneous expenses. No power expense was reported as this is a gravity system.

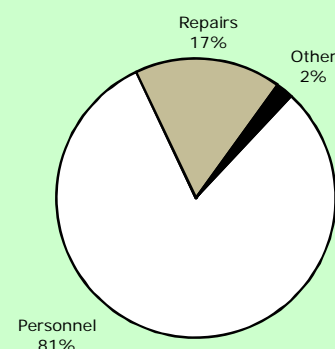
Data as of 2014.



Annual Water Use⁸
64,800 m³



Annual Water Billings⁸
NRs234,600



Annual O&M Costs⁹
NRs181,670

Water Utility	DUHABI WATER SUPPLY PROJECT MAIN USERS COMMITTEE Address : Ward No.5, Duhabi VDC, Sunwari District Telephone : +977 025 540401 Fax : none E-mail : duhabikhanepani_m@yahoo.com Head : Tej Narayan Rauniyar, Chairman Duhabi Water Supply Project Main Users Committee (DWSPMUC) became fully operational in 1995. It is legally registered with the District Water Resource Committee. DWSPMUC is responsible for water supply for 9 rural and urban wards of Duhabi-Bhaluwa Municipality which has a total population of 22,000 people. Its present service area has a population density of 722 persons/km ² . It draws water from 3 tubewells of which 2 are operational. It has a master development plan covering 2014 to 2016 but has no water safety plan in place. The service provider has an annual report for 2013 that is available to the public as well as an audited financial report for the same year. Two personnel attended training in 2011/4. DWSPMUC has a partly developed management information system but none of its operations is computerized.																																		
Mission Statement	No mission statement.																																		
General Data About Water Utility	Connections : 1,251 Staff : 9 Annual O&M Costs : NRs3,643,687 Annual Collections : NRs4,455,973 Annual Billings : NRs4,657,356 Annual Capital Expenditure : Nil Other Revenues: NRs871,522 Average capital expenditure/connection/year: Nil Duhabi Water Supply Project Main Users Committee received assistance under the SSTWSSP through the Government of Nepal and the Town Development Fund for source development, production and distribution.																																		
Tariff Structure	(Used in 2014) <table border="1"> <thead> <tr> <th colspan="2">Domestic Users</th><th colspan="2">Commercial/Institutional Users</th></tr> <tr> <th>MINIMUM CHARGE</th><th>(NRs)</th><th>MINIMUM CHARGE</th><th>(NRs)</th></tr> </thead> <tbody> <tr> <td>(First 10 m³ or less)</td><td>100.00</td><td>(First 10 m³ or less)</td><td>250.00</td></tr> <tr> <th>ADDITIONAL CHARGE</th><th></th><th>ADDITIONAL CHARGE</th><th></th></tr> <tr> <td>Consumption (m³)</td><td>(NRs/m³)</td><td>Consumption (m³)</td><td>(NRs/m³)</td></tr> <tr> <td>11 – 30</td><td>16.00</td><td>11 - 20</td><td>35.00</td></tr> <tr> <td>31 – 60</td><td>20.00</td><td>More than 20 m³</td><td>50.00</td></tr> <tr> <td>More than 60 m³</td><td>30.00</td><td></td><td></td></tr> </tbody> </table> <p>Notes:</p> <ol style="list-style-type: none"> All consumers pay on metered use. Consumers are billed monthly. Water bills are paid through bill collectors. There were 85 new connections in 2014. Price of new domestic connection is NRs5,400 payable prior to connection. The urban poor which comprise 20% of the service area population can pay NRs3,000 at the start and the rest in equal monthly payments over a period of 12 months. 			Domestic Users		Commercial/Institutional Users		MINIMUM CHARGE	(NRs)	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	100.00	(First 10 m ³ or less)	250.00	ADDITIONAL CHARGE		ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	Consumption (m ³)	(NRs/m ³)	11 – 30	16.00	11 - 20	35.00	31 – 60	20.00	More than 20 m ³	50.00	More than 60 m ³	30.00		
Domestic Users		Commercial/Institutional Users																																	
MINIMUM CHARGE	(NRs)	MINIMUM CHARGE	(NRs)																																
(First 10 m ³ or less)	100.00	(First 10 m ³ or less)	250.00																																
ADDITIONAL CHARGE		ADDITIONAL CHARGE																																	
Consumption (m ³)	(NRs/m ³)	Consumption (m ³)	(NRs/m ³)																																
11 – 30	16.00	11 - 20	35.00																																
31 – 60	20.00	More than 20 m ³	50.00																																
More than 60 m ³	30.00																																		
Priority Need of Utility	1. Improve water quality 2. Waste management. 3. Better accounting system to be more transparent.																																		
Consumer Service	Average monthly consumption is about 27.4 m ³ per connection. The water bill averages NRs310.24 per month per connection. Water is available 9 hours a day to most users in the dry months and 10 hours a day in the wet months. Average pressure at the tap is 15 meters. Applicants have to wait for 7 days for new connections to be made. Connection fee is paid all at the start. All 5 water samples taken during the year passed the residual chlorine test. There were 347 consumer complaints recorded and the same number of leaks repaired during the year. Consumers can complain in person at the water utility office or by telephone. The service provider allows the urban poor to pay the connection fee in installment over a period of one year.																																		
Performance Highlights	DWSPMUC provides the highest amount of water at 181 lpcd to its consumers for an average of 9 hours per day in the dry months and 10 hours per day in the wet months to only 28.2% of the population in its service area, the fifth lowest. NRW of 12.6% is almost in the top quartile but while consumption is 99.3% metered, production is not metered making the NRW an estimate at best. Financial management is fine with operating ratio at 0.78 and accounts receivable equivalent of 0.5 month except for 95.7% collection efficiency. Average tariff of NRs11.34/m ³ is just outside the bottom quartile but is enough to cover O&M expenses. Staff/1000 connections ratio at 7.2 is equal to the average. It is ironic that coverage is just above ¼ of the service area population and yet the service provider is supplying the highest supply per capita which may be due to tubewells used by those not connected. The low tariff may also be a reason for high per capita consumption. DWSPMUC has to meter production for a more accurate determination of its losses. It also has to collect all its bills from customers. Staff productivity and efficiency can be improved by investing in training of more staff. More samples should be tested for residual chlorine to check on the effectiveness of its disinfection measures.																																		

DUHABI WATER SUPPLY

Population: 6,500 ¹

Production/Distribution

Average Daily Production	1,288 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Chlorination
Raw water storage	450 m ³
Service Area ³	9.0 sq km
Distribution pipes	25.0 km

Service Connections

House (5.5 persons/HC)	1,192
Public Tap (300 persons/PT)	9
Commercial	0
Industrial	22
Institutional	28
Other	0
Total	1,251

Service Indicators

Service Coverage ⁴	28.2%
Water availability/day	9 hours in dry months 10 hours in wet months
Per Capita Consumption ⁵	181 l/c/d
Average Tariff	NRs11.34/m ³

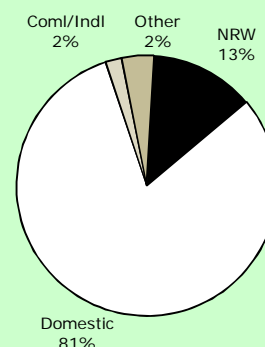
Efficiency Indicators

Non-Revenue Water ⁶	12.6%
Unit Production Cost	NRs7.75/m ³
Operating Ratio ⁷	0.78
Accounts Receivable	0.5 month
Staff/1,000 Connections	7.2

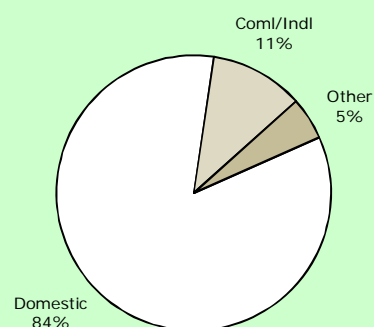
Notes:

- ¹ The population is for the present area served by the utility.
- ² All 5 water sample taken in 2014 passed the residual chlorine test.
- ³ Total area of responsibility is 12.0 sq km.
- ⁴ The population not served by the water utility draw water from tubewells.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 347 leaks repaired in 2014 while 75 meters were replaced.
- ⁷ The water service provider has no debt service.
- ⁸ Other use and billing are for institutional connections.
- ⁹ Other costs include transport, chemicals and miscellaneous expenses.

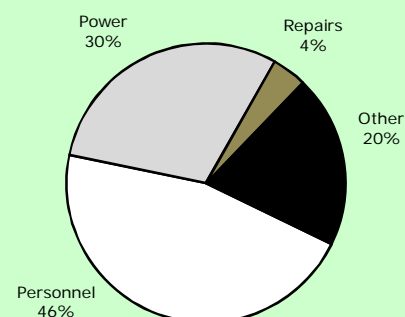
Data as of 2014.



Annual Water Use⁸
470,000 m³



Annual Water Billings⁸
NRs4,657,356



Annual O&M Costs⁹
NRs3,643,687

Water Utility	FIKKAL DRINKING WATER AND SANITATION USERS ASSOCIATION																										
	Address : Ward No.6, Fikkal, Suryodaya Municipality, Ilam District Telephone : +977 027 540240 Fax : none E-mail : none Head : Durga Kumar Baral, Chairperson																										
	Fikkal Drinking Water and Sanitation Users Association (FDWSUA) became fully operational in 1999. It is legally registered with the District Water Resource Committee. FDWSUA is responsible for water supply for 3 urban and rural wards of Suryodaya which has a total population of 10,000 people. Its present service area has a population density of 75 persons/km ² . It draws water from a single spring intake. It has a master development plan covering 2012 to 2017 and a water safety plan in place since 2012. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. No personnel attended training in 2014. FDWSUA has a partially developed management information system and its billing system is computerized.																										
Mission Statement	No mission statement.																										
General Data About Water Utility	Connections : 1,010 Staff : 9 Annual O&M Costs : NRs1,595,878 Annual Collections : NRs2,878,787 Annual Billings : NRs2,728,520 Annual Capital Expenditure : Nil Other Revenues: NRs1,415,088 Average capital expenditure/connection/year: Nil Fikkal Drinking Water and Sanitation Users Association received no assistance from the government, non government organizations or funding agencies in the past year.																										
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>Household</th><th>Commercial-Institutional/Industrial</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>150.00</td><td>200.00/300.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td><td>(NRs/m³)</td></tr><tr><td>11 - 15</td><td>15.00</td><td>15.00</td></tr><tr><td>16 - 20</td><td>20.00</td><td>20.00</td></tr><tr><td>More than 20 m³</td><td>25.00</td><td>25.00</td></tr></table> <p>Notes:</p> <ol style="list-style-type: none">All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.There were 105 new connections in 2014. Price of new domestic connection is NRs10,000 payable prior to connection.The urban poor which comprise 10% of the service area population can avail of a 60% discount on connection charges paying only NRs4,000.			Category	Household	Commercial-Institutional/Industrial	MINIMUM CHARGE	(NRs)	(NRs)	(First 10 m ³ or less)	150.00	200.00/300.00	ADDITIONAL CHARGE			Consumption (m ³)	(NRs/m ³)	(NRs/m ³)	11 - 15	15.00	15.00	16 - 20	20.00	20.00	More than 20 m ³	25.00	25.00
Category	Household	Commercial-Institutional/Industrial																									
MINIMUM CHARGE	(NRs)	(NRs)																									
(First 10 m ³ or less)	150.00	200.00/300.00																									
ADDITIONAL CHARGE																											
Consumption (m ³)	(NRs/m ³)	(NRs/m ³)																									
11 - 15	15.00	15.00																									
16 - 20	20.00	20.00																									
More than 20 m ³	25.00	25.00																									
Priority Need of Utility	1. Introduce treatment plant. 2. Construct fence around the reservoir. 3. Construct office building.																										
Consumer Service	Average monthly consumption is about 7.3 m ³ per connection. The water bill averages NRs225.13 per month per connection. Water is available for 24 hours a day to most users in both dry months and wet months. Average pressure at the tap is 10 meters. Applicants have to wait for 7 days for new connections to be made. Connection fee is paid all at the start. All 8 water sample taken in 2014 passed the residual chlorine test. There were 56 consumer complaints reported and 56 leaks repaired during the year. Consumers can complain by calling the water service provider's office through telephone. The service provider gives a 60% discount on connection charges to the urban poor.																										
Performance Highlights	FDWSUA provides water at only 49 lpcd to its consumers for an average of 24 hours per day throughout the year to 50% of the population in its service area. NRW of 37.3% is sixth highest with consumption fully metered but not for production rendering the NRW value unreliable. Financial management is good with operating ratio of 0.58, accounts receivable equivalent of 0.8 month and collection efficiency of 105.5% suggesting efforts at collecting past arrears. Average tariff of NRs30.66/m ³ is third highest which is more than enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 8.9 is at the bottom quartile among the highest. With a low operating ratio, FDWSUA may be able to develop new sources to increase water supply to customers and expand coverage without increasing tariff. It should meter its production to have a better determination of its losses to be able to appropriately address high NRW. FDWSUA should send its staff to training courses to develop their capacity and increase their productivity. Monitoring of residual chlorine should be according to the national drinking water standards.																										

FIKKAL WATER SUPPLY

Population: 5,400 ¹

Production/Distribution

Average Daily Production	389 m ³ /d
Groundwater	Nil
Surface Water	100%
Treatment Type ²	Chlorination
Raw water storage	200 m ³
Service Area ³	72.0 sq km
Distribution pipes	48.0 km

Service Connections

House (5.2 persons/HC)	955
Public Tap	0
Commercial	30
Industrial	5
Institutional	20
Other	0
Total	1,010

Service Indicators

Service Coverage ⁴	50.0%
Water availability/day	24 hours in dry months
	24 hours in wet months
Per Capita Consumption ⁵	49 l/c/d
Average Tariff	NRs30.66/m ³

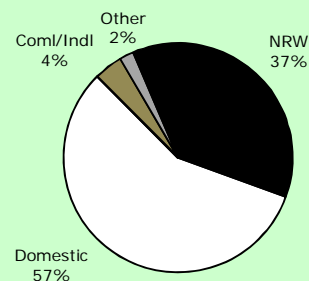
Efficiency Indicators

Non-Revenue Water ⁶	37.3%
Unit Production Cost	NRs11.25/m ³
Operating Ratio ⁷	0.58
Accounts Receivable	0.8 month
Staff/1,000 Connections	8.9

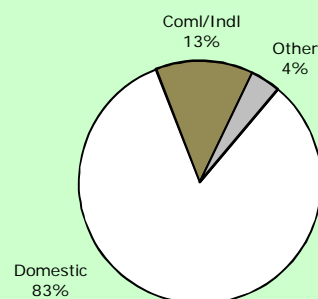
Notes:

- ¹ The population is for the present area served by the utility.
- ² All of 8 water samples taken in 2014 passed the residual chlorine test.
- ³ The present service area is an expansion from the original area of responsibility of 48 sq. km.
- ⁴ The population not served by the water utility draw water from other piped water service providers, springs, rivers, streams and rain collectors.
- ⁵ This is based on the total consumption from all types of connections.
- ⁶ There were 56 leaks repaired in 2014 while 17 meters were either replaced or repaired.
- ⁷ Operating cost does not include debt service of NRs.1,600,000.
- ⁸ Other use and billing are for institutional connections.
- ⁹ Other costs are for miscellaneous expenses.

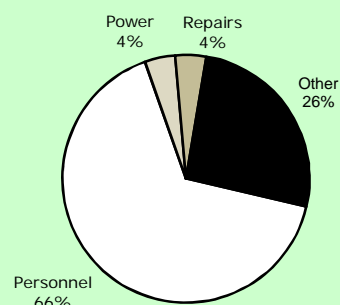
Data as of 2014.



Annual Water Use⁸
141,910 m³



Annual Water Billings⁸
NRs2,728,520



Annual O&M Costs⁹
NRs1,595,878

Water Utility	GAINDAKOT WATER SUPPLY USERS AND SANITATION ORGANIZATION																				
	Address : Ward No.4, Jhapardi, Gaindakot Municipality, Nawalparasi District Telephone : +977 056 502345 Fax : none E-mail : none Head : Shovakhar Rimal, Chairperson																				
	Gaindakot Water Supply Users and Sanitation Organization (GWSUSO) became fully operational in 2005. It is legally registered with the District Water Resource Committee. GWSUSO is responsible for water supply for 6 urban wards of Gaindakot which has a total population of 30,000 people. No data was given on the size of the present service area. It draws water from 4 wells of which 3 are operational. It has no master development plan but has a water safety plan in place since 2014. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. One personnel attended training conducted by DWSS in 2014. GWSUSO has a well developed management information system and its billing and accounting systems are computerized.																				
Mission Statement	Safe water, healthy life.																				
General Data About Water Utility	Connections : 4,000 Staff : 9 Annual O&M Costs : NRs5,056,026 Annual Collections : NRs7,040,188 Annual Billings : NRs7,040,188 Annual Capital Expenditure : NRs1,113,040 Other Revenues: NRs4,019,62 Average capital expenditure/connection/year: NRs278.26 Gaindakot Water Supply Users and Sanitation Organization received no assistance from the government, non government organizations or funding agencies in the past year.																				
Tariff Structure	<div>(Used in 2014)</div> <table><tr><th>Category</th><th>Household</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>70.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>11 - 30</td><td>10.00</td></tr><tr><td>31 - 50</td><td>12.00</td></tr><tr><td>51 - 70</td><td>14.00</td></tr><tr><td>More than 70 m³</td><td>16.00</td></tr></table> <div>Notes: 1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office. 2. There were 290 new connections in 2014. Price of new domestic connection is NRs11,175 payable prior to connection. 3. There are no urban poor in the present service area.</div>			Category	Household	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	70.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	11 - 30	10.00	31 - 50	12.00	51 - 70	14.00	More than 70 m ³	16.00
Category	Household																				
MINIMUM CHARGE	(NRs)																				
(First 10 m ³ or less)	70.00																				
ADDITIONAL CHARGE																					
Consumption (m ³)	(NRs/m ³)																				
11 - 30	10.00																				
31 - 50	12.00																				
51 - 70	14.00																				
More than 70 m ³	16.00																				
Priority Need of Utility	1. Automatic chlorine dosing unit. 2. Training for employees. 3. Alternative options for electricity and fuel.																				
Consumer Service	Average monthly consumption is about 29.0 m ³ per connection. The water bill averages NRs146.67 per month per connection. Water is available for 24 hours a day to most users in both dry months and wet months. Average pressure at the tap is 9 meters. Applicants have to wait for 3 days for new connections to be made. Connection fee is paid all at the start. Of 35 water samples taken in 2014, 33 passed the residual chlorine test. No consumer complaints were reported while 950 leaks were repaired during the year. Consumers can complain in person at the water service provider's office, through telephone or by writing a letter. The service provider has no policy for providing water to the urban poor.																				
Performance Highlights	GWSUSO provides water at 159 lpcd to its consumers for an average of 24 hours per day throughout the year to 80% of the population in its service area. NRW of 15% is better than average with consumption fully metered but not for production rendering the NRW value unreliable. Financial management is good with operating ratio of 0.72, no accounts receivable and collection efficiency of 100%. Average tariff of NRs5.05/m ³ is second lowest but is more than enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 2.3 is the lowest. Customer satisfaction is good although the service provider may need to expand coverage with development of additional source. GWSUSO can still afford to increase tariff to fund the additional source with its very low tariff. The low tariff may also be a factor for the high per capita consumption which is the second highest. The service provider should also meter its production to have a better determination of its losses to properly address them. GWSUSO should send its staff to training courses to develop their capacity and increase their productivity.																				

GAINDAKOT WATER SUPPLY

Population: 24,000 ¹

Production/Distribution

Average Daily Production	4,492 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Chlorination
Raw water storage	450 m ³
Service Area ³	no data
Distribution pipes	110.0 km

Service Connections

House (6 persons/HC)	4,000
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	4,000

Service Indicators

Service Coverage ⁴	80.0%
Water availability/day	24 hours in dry months 24 hours in wet months
Per Capita Consumption ⁵	159 l/c/d
Average Tariff	NRs5.05/m ³

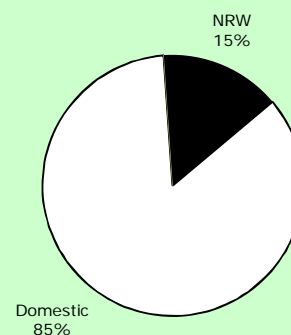
Efficiency Indicators

Non-Revenue Water ⁶	15.0%
Unit Production Cost	NRs3.08/m ³
Operating Ratio ⁷	0.72
Accounts Receivable	Nil
Staff/1,000 Connections	2.3

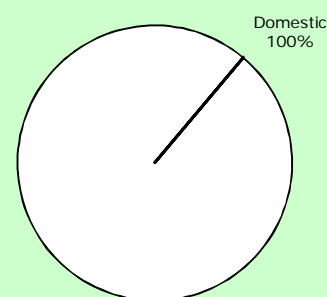
Notes:

- ¹ The population is for the present area served by the utility.
- ² Of 35 water samples taken in 2014, 33 passed the residual chlorine test.
- ³ No data were provided for the present service area and area of responsibility.
- ⁴ The population not served by the water utility draw water from tubewells and dug wells.
- ⁵ This is based on the total consumption which all come from domestic connections.
- ⁶ There were 950 leaks repaired in 2014 while 950 meters were either replaced or repaired.
- ⁷ The water service provider had no debt service in 2014.
- ⁸ All use and billing come from domestic connections.
- ⁹ Other costs include transport and miscellaneous expenses.

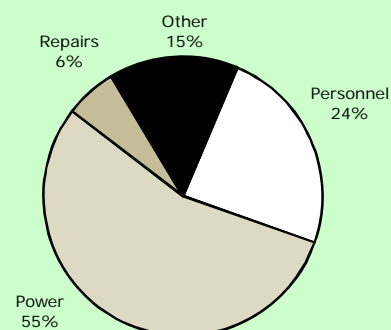
Data as of 2014.



Annual Water Use⁸
1,639,500 m³



Annual Water Billings⁸
NRs7,040,188



Annual O&M Costs⁹
NRs5,056,026

Water Utility	NEPAL WATER SUPPLY CORPORATION, GAUR														
	Address : Ward No.1, Pani Tanki, Gaur Municipality, Rautahat District Telephone : +977 055 520611 Fax : +977 055 521222 E-mail : nwsc_gaur@gmail.com Head : Krishna Bhusan Lal, Technical Officer														
	Nepal Water Supply Corporation, Gaur (NWSC Gaur) became fully operational in 1989. It is legally registered under the NWSC Act 1989. NWSC Gaur is responsible for water supply for 9 urban wards of Gaur Municipality which have a total population of 16,000 people. Its present service area has a population density of 531 persons/km ² . It draws water from 4 tubewells of which 2 are operational. It has no master development plan but has a water safety plan in place since 2000. The service provider has a annual report for 2014 and an audited financial report for 2013. No personnel attended training in 2014. NWSC Gaur has a well developed management information system. None of its operations is computerized.														
Mission Statement	No mission statement.														
General Data About Water Utility	Connections : 1,095 Staff : 17 Annual O&M Costs : NRs6,208,289 Annual Collections : NRs1,806,369 Annual Billings : NRs2,385,714 Annual Capital Expenditure : NRs1,830,047 Other Revenues: Nil Average capital expenditure/connection/year: NRs1,671.28 Nepal Water Supply Corporation, Gaur received no assistance from the government, non government organizations or funding agencies in the past year.														
Tariff Structure	(Used in 2014) <table><thead><tr><th>Category</th><th>All Users</th></tr></thead><tbody><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>110.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>More than 10 m³</td><td>25.00</td></tr></tbody></table> <div>Unmetered connections pay a flat rate of NRs560 per month.</div> <div>Notes: 1. All consumers pay on metered use or flat rate. Consumers are billed monthly. Water bills are paid at the water service provider's office. 2. There were 35 new connections in 2014. Price of new domestic connection is NRs3,725 payable prior to connection. 3. The urban poor which comprise 12% of the service area population are provided with public taps which are free.</div>			Category	All Users	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	110.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	More than 10 m ³	25.00
Category	All Users														
MINIMUM CHARGE	(NRs)														
(First 10 m ³ or less)	110.00														
ADDITIONAL CHARGE															
Consumption (m ³)	(NRs/m ³)														
More than 10 m ³	25.00														
Priority Need of Utility	1. Provide safe drinking water. 2. Construct overhead tank. 3. Replace old pipes to reduce NRW and prevent contamination.														
Consumer Service	Average monthly consumption is about 18.6 m ³ per connection. The water bill averages NRs181.56 per month per connection. Water is available for 7 hours a day to most users during both the dry months and wet months. Average pressure at the tap is 1.5 meters. Applicants have to wait for 3 days for new connections to be made. Connection fee is paid all at the start. All 40 water samples taken during the year passed the residual chlorine test. There were 170 consumer complaints recorded and 150 leaks repaired during the year. Consumers can complain in person at the water utility office, by telephone or by writing a letter. The service provider provides free water to the urban poor through public taps.														
Performance Highlights	NWSC Gaur provides water at only 57 lpcd to its consumers for an average of 7 hours per day throughout the year to 73.5% of the population in its service area. NRW of 25.5% is higher than average with production fully metered and consumption 90.4% metered. Financial management needs improvement with operating ratio at 2.60, accounts receivable equivalent of 2.9 months and collection efficiency of 75.7%, the second lowest. Average tariff of NRs9.75/m ³ is in the bottom quartile and inadequate to cover operating expenses. Staff/1000 connections ratio at 15.5 is third highest. NWSC Gaur need to provide more water to its customers, expand coverage to more people in its service area and extend water availability to more than 7 hours per day. It may have to develop new sources with corresponding tariff increase and reducing its water losses. Tariff increase is also needed for revenues to cover O&M costs with measures to collect all bills also in a timely manner. NWSC Gaur should send more staff to training courses to develop their capacity and increase their productivity.														

GAUR WATER SUPPLY

Population: 13,000 ¹

Production/Distribution

Average Daily Production	900 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Chlorination
Total water storage	450 m ³
Service Area ³	24.5 sq km
Distribution pipes	29.0 km

Service Connections

House (9 persons/HC)	1,051
Public Tap (200 persons/PT)	10
Commercial	0
Industrial	0
Institutional	33
Other (Hospital)	1
Total	1,095

Service Indicators

Service Coverage ⁴	73.5%
Water availability/day	7 hours in dry months 7 hours in wet months
Per Capita Consumption ⁵	57 l/c/d
Average Tariff	NRs9.75/m ³

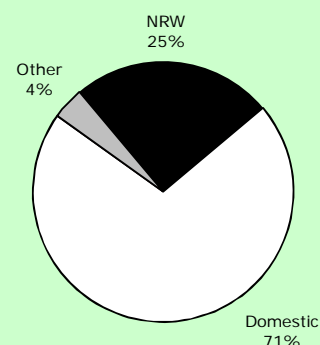
Efficiency Indicators

Non-Revenue Water ⁶	25.5%
Unit Production Cost	NRs18.90/m ³
Operating Ratio ⁷	2.60
Accounts Receivable	2.9 months
Staff/1,000 Connections	15.5

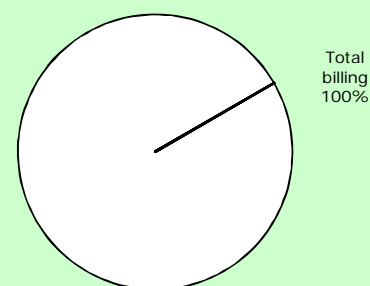
Notes:

- ¹ The population is for the present area served by the utility.
- ² All 40 water samples taken in 2014 passed the residual chlorine test.
- ³ Total area of responsibility is 31.9 sq. km.
- ⁴ The population not served by the water utility draw water from tubewells.
- ⁵ This is based on total consumption from all types of connections.
- ⁶ There were 150 leaks repaired in 2014 while 120 meters were either replaced or repaired.
- ⁷ The water service provider had no debt service in 2014.
- ⁸ Other water use is for institutional connections and one hospital.
- ⁹ No breakdown of billing by type of connection was provided.
- ¹⁰ Other costs include transport and chemicals.

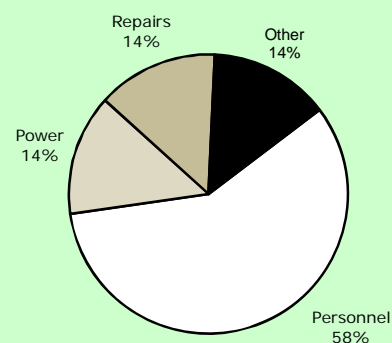
Data as of 2014.



Annual Water Use⁸
328,500 m³



Annual Water Billings⁹
NRs2,385,714



Annual O&M Costs¹⁰
NRs6,208,289

Water Utility	GAURADAH WATER AND SANITATION USERS COMMITTEE																																
	Address : Ward No.9, Bajar, Gauradaha, Jhapa District Telephone : +977 023 480207 Fax : none E-mail : none Head : Govinda Bahadur Khadka, Chairperson																																
	Gauradaha Water and Sanitation Users Committee (GWSUC) became fully operational in 2002. It is legally registered with the District Water Resource Committee. GWSUC is responsible for water supply for 8 urban and rural wards of Gauradaha which has a total population of 20,155 people. Its present service area has a population density of 672 persons/km ² . It draws water from 5 tubewells of which 2 are operational. It has a master development plan covering 2009 to 2018 and a water safety plan in place 2009. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. No personnel attended training in 2014. GWSUC has no management information system. None of its operations is computerized.																																
Mission Statement	One tap, one toilet.																																
General Data About Water Utility	Connections : 1,465 Staff : 7 Annual O&M Costs : NRs4,116,155 Annual Collections : NRs2,907,243 Annual Billings : NRs2,894,558 Annual Capital Expenditure : Nil Other Revenues: NRs2,180,069 Average capital expenditure/connection/year: Nil Gauradaha Water and Sanitation Users Committee received technical and financial assistance from WSSDO in pipeline and valve chamber maintenance.																																
Tariff Structure	<p>(Used in 2012)</p> <table><tr><th>Category</th><th>All Users</th><th>Community Taps</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td><td>Flat rate</td></tr><tr><td>(First 8 m³ or less)</td><td>100.00</td><td>NRs12.50/m³</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td><td></td></tr><tr><td>9 - 15</td><td>15.00</td><td></td></tr><tr><td>16 - 20</td><td>18.00</td><td></td></tr><tr><td>21 - 25</td><td>20.00</td><td></td></tr><tr><td>26 - 30</td><td>25.00</td><td></td></tr><tr><td>More than 30 m³</td><td>30.00</td><td></td></tr></table> <p>Notes:</p> <ol style="list-style-type: none">1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.2. There were 176 new connections in 2014. Price of new domestic connection is NRs6,000 payable prior to connection.3. The urban poor who comprise 2% of the service area population can pay connection fee in installment and can use community taps at a low flat rate.			Category	All Users	Community Taps	MINIMUM CHARGE	(NRs)	Flat rate	(First 8 m ³ or less)	100.00	NRs12.50/m ³	ADDITIONAL CHARGE			Consumption (m ³)	(NRs/m ³)		9 - 15	15.00		16 - 20	18.00		21 - 25	20.00		26 - 30	25.00		More than 30 m ³	30.00	
Category	All Users	Community Taps																															
MINIMUM CHARGE	(NRs)	Flat rate																															
(First 8 m ³ or less)	100.00	NRs12.50/m ³																															
ADDITIONAL CHARGE																																	
Consumption (m ³)	(NRs/m ³)																																
9 - 15	15.00																																
16 - 20	18.00																																
21 - 25	20.00																																
26 - 30	25.00																																
More than 30 m ³	30.00																																
Priority Need of Utility	1. Increase in storage capacity. 2. Additional borehole or tubewell. 3. Extension of distribution pipeline.																																
Consumer Service	Average monthly consumption is about 10.3 m ³ per connection. The water bill averages NRs164.65 per month per connection. Water is available 24 hours a day to most users in both the dry months and wet months with the help of power generators. Average pressure at the tap is 9 meters. Applicants have to wait for only one day for new connections to be made. Connection fee is paid all at the start. All 120 water samples taken in 2014 passed the residual chlorine test. There were 150 consumer complaints recorded and 150 leaks were repaired during the year. Consumers can complain in person at the water utility office and by telephone. The service provider allows low flat rate and installment connection fees for community taps to the urban poor.																																
Performance Highlights	GWSUC provides water at 55 lpcd to its consumers for an average of 24 hours per day during both dry and wet months to only 45.1% of the population in its service area. NRW of 44.9% is third highest with both production consumption 100% metered. Operating ratio is 1.42 with revenues not enough to cover O&M expenses mainly because of the high NRW. Accounts receivable equivalent is 0.4 month with collection efficiency of 100.4%. Average tariff of NRs16.01/m ³ is just above average but not enough to produce the necessary revenues to cover operating costs. Staff/1000 connections ratio at 4.8 is better than the average. There is a need to reduce NRW which will allow the service provider to provide more water to consumers and expand its service to more households and also to improve its finances together with the development of new sources. GWSUC can also invest in training its staff to increase their productivity and efficiency.																																

GAURADAHA WATER SUPPLYPopulation: 18,829 ¹**Production/Distribution**

Average Daily Production	900 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Pressure filter & aeration
Treated water storage	450 m ³
Service Area ³	28.0 sq km
Distribution pipes	53.0 km

Service Connections

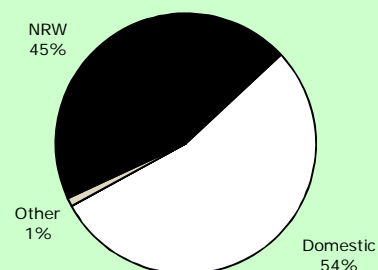
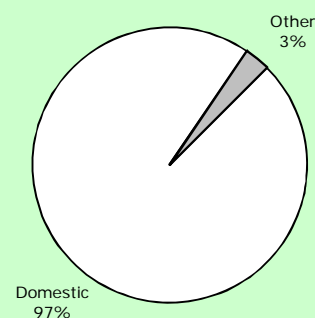
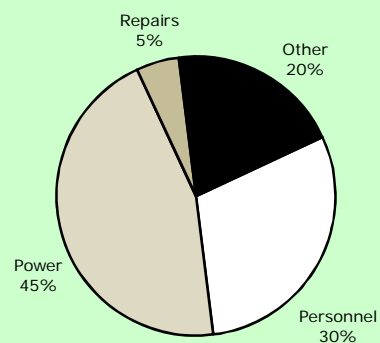
House (6 persons/HC)	1,454
Public Tap (300 persons/PT)	1
Commercial	0
Industrial	0
Institutional	10
Other	0
Total	1,465

Service Indicators

Service Coverage ⁴	45.1%
Water availability/day	24 hours in dry months
	24 hours in wet months
Per Capita Consumption ⁵	55 l/c/d
Average Tariff	NRs16.01/m ³

Efficiency Indicators

Non-Revenue Water ⁶	44.9%
Unit Production Cost	NRs12.53/m ³
Operating Ratio ⁷	1.42
Accounts Receivable	0.4 month
Staff/1,000 Connections	4.8

Notes:¹ The population is for the present area served by the utility.² All 120 water samples taken in 2014 passed the residual chlorine test.³ The total area of responsibility is 36 sq km.⁴ The population not served by the water utility draw water from tubewells.⁵ This is based on the total consumption from all connections.⁶ There were 150 leaks repaired in 2014 while only 4 meters were either replaced or repaired.⁷ The water service provider had no debt service in 2014.⁸ Other use and billing are from institutional connections.⁹ Other costs include chemical, transport and miscellaneous expenses.**Data as of 2014.****Annual Water Use⁸**
328,386 m³**Annual Water Billings⁸**
NRs2,894,558**Annual O&M Costs⁹**
NRs4,116,155

Water Utility	GHORAH DRINKING WATER USERS AND SANITATION ASSOCIATION																				
	Address : Ward No.11, Ghorahi Municipality, Dang District Telephone : +977 082 560534 Fax : +977 082 560488 E-mail : ghorahikhanepaniorgdang@gmail.com Head : Devi Bahadur DC, Chairperson																				
	Ghorahi Drinking Water Users and Sanitation Association (GDWUSA) became fully operational in 1997. It is legally registered with the District Water Resource Committee. GDWUSA is responsible for water supply for 5 urban and rural wards of Ghorahi which has a total population of 54,388 people. Its present service area has a population density of 905 persons/km ² . It draws water from a spring intake and 10 wells of which 9 are operational. It has a master development plan covering 2013 to 2015 and a water safety plan in place since 2011. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. No personnel attended training in 2014. GDWUSA has a partly developed management information system and its billing system is computerized.																				
Mission Statement	No mission statement.																				
General Data About Water Utility	Connections : 5,142 Staff : 26 Annual O&M Costs : NRs16,528,583 Annual Collections : NRs20,674,313 Annual Billings : NRs21,494,502 Annual Capital Expenditure : NRs 1,000,000 Other Revenues: NRs8,842,077 Average capital expenditure/connection/year: NRs194.48 Ghorahi Drinking Water Users and Sanitation Association received technical and financial assistance from WSSDO for water safety plan training and financial assistance from the municipal government for its green city program.																				
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>All users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 8 m³ or less)</td><td>160.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>9 - 20</td><td>30.00</td></tr><tr><td>21 - 30</td><td>40.00</td></tr><tr><td>More than 30 m³</td><td>45.00</td></tr><tr><td></td><td></td></tr></table> <p>Notes:</p> <p>1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.</p> <p>2. There were 252 new connections in 2014. Price of new domestic connection is NRs30,035 payable prior to connection.</p> <p>3. The urban poor which comprise 5% of the service area population are provided with community taps for at least 5 families per tap with subsidized connection fee.</p>			Category	All users	MINIMUM CHARGE	(NRs)	(First 8 m ³ or less)	160.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	9 - 20	30.00	21 - 30	40.00	More than 30 m ³	45.00		
Category	All users																				
MINIMUM CHARGE	(NRs)																				
(First 8 m ³ or less)	160.00																				
ADDITIONAL CHARGE																					
Consumption (m ³)	(NRs/m ³)																				
9 - 20	30.00																				
21 - 30	40.00																				
More than 30 m ³	45.00																				
Priority Need of Utility	1. Overhead tank construction and distribution lines. 2. New bore well and sump well in Sewar River. 3. Installation of slow sand and roughing filters.																				
Consumer Service	Average monthly consumption is about 14.0 m ³ per connection. The water bill averages NRs348.35 per month per connection. Water is available for only 2 hours a day to most users in the dry months and 3 hours a day in the wet months. Average pressure at the tap is 5 meters. Applicants have to wait for 10 days for new connections to be made. Connection fee is paid all at the start. No water samples were taken in 2014 for residual chlorine test. There were 1,143 consumer complaints reported and 350 leaks repaired during the year. Consumers can complain in person at the water service provider's office or by telephone. The service provider provides community taps to the urban poor with subsidized connection fees.																				
Performance Highlights	GDWUSA provides water at only 58 lpcd to its consumers for an average of 2 hours per day in the dry months and 3 hours per day in the wet months to 75.4% of the population in its service area. NRW of 22.4% is just higher than average with consumption 95% metered but none for production rendering the NRW value unreliable. Financial management is good with operating ratio of 0.77 and accounts receivable equivalent of 0.4 month although collection efficiency at 96.2% needs some improvement. Average tariff of NRs24.82/m ³ is in the top quartile and is more than enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 5.1 is good, lower than the average. GDWUSA may have to develop new sources to increase water supply to customers and expand coverage. It can extend water availability with the use of power generators. It should also meter its production to have a better determination of its losses to appropriately address them. GDWUSA should send its staff to training courses to develop their capacity and increase their productivity. It needs to monitor residual chlorine properly according to national drinking water standards to check on the effectiveness of its disinfection treatment.																				

GHORAH I WATER SUPPLY

Population: 41,000 ¹

Production/Distribution

Average Daily Production	3,056 m ³ /d
Groundwater	62%
Surface Water	38%
Treatment Type ²	Sedimentation, aeration & filters
Treated water storage	1,710 m ³
Service Area ³	45.3 sq km
Distribution pipes	88.0 km

Service Connections

House (8 persons/HC)	5,114
Public Tap (36 persons/PT)	28
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	5,142

Service Indicators

Service Coverage ⁴	75.4%
Water availability/day	2 hours in dry months 3 hours in wet months
Per Capita Consumption ⁵	58 l/c/d
Average Tariff	NRs24.82/m ³

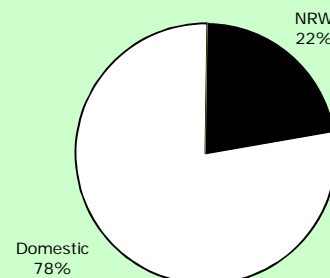
Efficiency Indicators

Non-Revenue Water ⁶	22.4%
Unit Production Cost	NRs14.82/m ³
Operating Ratio ⁷	0.77
Accounts Receivable	0.4 month
Staff/1,000 Connections	5.1

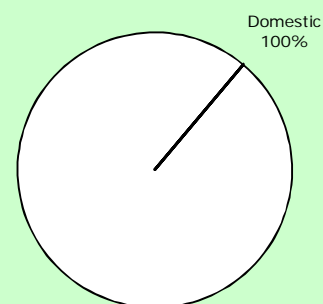
Notes:

- ¹ The population is for the present area served by the utility.
- ² No water samples were taken in 2014 for residual chlorine test.
- ³ Total area of responsibility is 60.0 sq. km.
- ⁴ The population not served by the water utility draw water from other piped water service providers, tube wells, dug wells, springs, rivers and streams.
- ⁵ This is based on the total consumption from all types of connections.
- ⁶ There were 350 leaks repaired in 2014 while 332 meters were either replaced or repaired.
- ⁷ Operating cost does not include debt service of NRs.9,229,426.
- ⁸ Total use and billing are all from domestic connections.
- ⁹ Other costs include transport, chemicals and miscellaneous expenses.

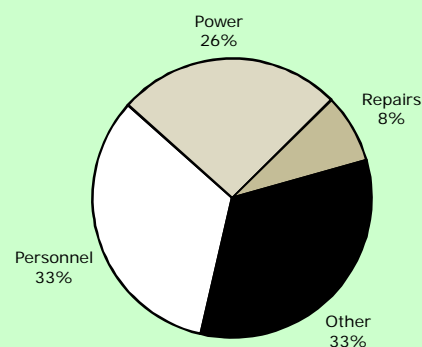
Data as of 2014.



Annual Water Use⁸
1,115,280 m³



Annual Water Billings⁸
NRs21,494,502



Annual O&M Costs⁹
NRs16,528,583

Water Utility	HARAICHA WATER SUPPLY AND SANITATION USERS COMMITTEE																							
	Address : Ward No.14, Pacham, Koshi Haraicha, Morang District Telephone : +977 981 5358321 Fax : none E-mail : dayaram_khawas2001@yahoo.com Head : Bir Bahadur Khulal, Chairman																							
	Haraicha Water Supply and Sanitation Users Committee (HWSSUC) became fully operational in 2000. It is legally registered with the District Water Resource Committee. HWSSUC is responsible for water supply for 14 rural wards of Hairacha, Indrapur, Mrigauliya and Banigama VDCs which have a total population of 10,000 people. Its present service area has a population density of 713 persons/km ² . It draws water from 2 tubewells which are both operational. It has no master development plan but has a water safety plan in place since 2012. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. Two personnel attended training in 2014. HWSSUC has a well developed management information system. None of its operations is computerized.																							
Mission Statement	No mission statement.																							
General Data About Water Utility	Connections : 539 Staff : 3 Annual O&M Costs : NRs961,269 Annual Collections : NRs784,208 Annual Billings : NRs799,208 Annual Capital Expenditure : Nil Other Revenues: NRs271,004 Average capital expenditure/connection/year: Nil Haraicha Water Supply and Sanitation Users Committee received financial assistance from WSSDO and World Vision International in the past year.																							
Tariff Structure	(Used in 2012) <table><tr><th>Category</th><th>House</th><th>Institutions</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td><td></td></tr><tr><td>(First 9 m³ or less)</td><td>80.00</td><td>Free</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td><td>(NRs/m³)</td></tr><tr><td>10 - 30</td><td>20.00</td><td>20.00</td></tr><tr><td>More than 30 m³</td><td>30.00</td><td>30.00</td></tr></table> Notes: 1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office. 2. There were 35 new connections in 2014. Price of new domestic connection is NRs9,000 payable prior to connection. 3. The urban poor which comprise 20% of the service area population are not given any special tariff rates or connection charges.			Category	House	Institutions	MINIMUM CHARGE	(NRs)		(First 9 m ³ or less)	80.00	Free	ADDITIONAL CHARGE			Consumption (m ³)	(NRs/m ³)	(NRs/m ³)	10 - 30	20.00	20.00	More than 30 m ³	30.00	30.00
Category	House	Institutions																						
MINIMUM CHARGE	(NRs)																							
(First 9 m ³ or less)	80.00	Free																						
ADDITIONAL CHARGE																								
Consumption (m ³)	(NRs/m ³)	(NRs/m ³)																						
10 - 30	20.00	20.00																						
More than 30 m ³	30.00	30.00																						
Priority Need of Utility	1. Procurement of power generator. 2. Construction of underground water tank. 3. Installation of a filtration plant.																							
Consumer Service	Average monthly consumption is about 10.5 m ³ per connection. The water bill averages NRs123.56 per month per connection. Water is available 18 hours a day to most users during the wet months and 20 hours during the dry months. Average pressure at the tap is 12 meters. Applicants have to wait for 7 days for new connections to be made. Connection fee is paid all at the start. All 5 water samples that were taken during the year passed the residual chlorine test. There were only 6 consumer complaints recorded while 20 leaks were repaired during the year. Consumers can complain by telephone. The service provider has no special policy for providing water supply to the urban poor except the provision of water through community taps.																							
Performance Highlights	HWSSUC provides water at only 44 lpcd to its consumers for an average of 20 - 18 hours per day during the dry and wet months, respectively, to only 42.8% of the population in its service area. NRW of 36.9% is seventh highest with production not metered and consumption 100% metered making NRW an estimate at best. Financial management still needs improvement with an operating ratio of 1.20 and collection efficiency of 98.1% despite having accounts receivable equivalent of only 0.2 month. The service provider has lower than average tariff of NRs11.73/m ³ and does not produce enough revenues to cover O&M expenses. Staff/1000 connections ratio at 5.6 is at the median and lower than the average. There is a need to increase tariff to allow the utility to cover its operating costs and raise capital to expand its services to more households and provide more supply to consumers. The service provider should meter its production to better determine the extent of its losses to address them properly. HWSSUC has to monitor residual chlorine better according to the national drinking water standards to check effectiveness of its chlorination measures.																							

HARAICHA WATER SUPPLYPopulation: 4,280 ¹**Production/Distribution**

Average Daily Production	296 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Chlorination
Raw water storage	50 m ³
Service Area ³	6.0 sq km
Distribution pipes	34.0 km

Service Connections

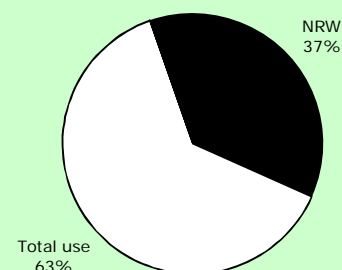
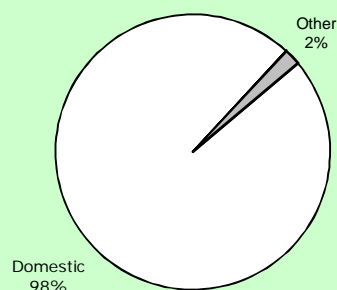
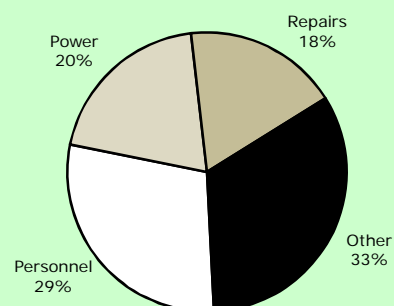
House (7 persons/HC)	535
Public Tap	0
Commercial	0
Industrial	0
Institutional	4
Other	0
Total	539

Service Indicators

Service Coverage ⁴	42.8%
Water availability/day	20 hours in dry months 18 hours in wet months
Per Capita Consumption ⁵	44 l/c/d
Average Tariff	NRs11.73/m ³

Efficiency Indicators

Non-Revenue Water ⁶	36.9%
Unit Production Cost	NRs8.90/m ³
Operating Ratio ⁷	1.20
Accounts Receivable	0.2 month
Staff/1,000 Connections	5.6

Notes:¹ The population is for the present area served by the utility.² All 5 water samples taken in 2014 passed the residual chlorine test.³ This is also the total area of responsibility.⁴ The population not served by the water utility draw water from tubewells.⁵ This is based on the total consumption which is mostly domestic and institutional.⁶ There were 20 leaks repaired in 2014 while 10 meters were either replaced or repaired.⁷ The water service provider had no debt service in 2014.⁸ No breakdown of consumption was provided. Other billing is for institutional connections.⁹ Other costs include chemical, transport and miscellaneous expenses.**Data as of 2014.****Annual Water Use⁸**
108,000 m³**Annual Water Billings⁸**
NRs799,208**Annual O&M Costs⁹**
NRs961,269

Water Utility	HETAUDA WATER SUPPLY MANAGEMENT BOARD Address : Ward No. 2, Harikunj Road, Hetauda Municipality, Makwanpur District Telephone : +977 057 520 313 Fax : none E-mail : hwsmbboard@gmail.com Head : Sudarsan Dhakal, Executive Director <p>Hetauda Water Supply Management Board (HWSMB) took operational control of the water supply system from the municipal government in 2013. It is responsible for water supply for 10 urban and rural wards of Hetauda municipality which has a total population of 84,000 people. Its present service area has a population density of 2,235 persons/km². The HWSMB draws water from 2 river intakes and 7 tubewells, 2 dug wells and an infiltration gallery. HWSMB has no master development plan but has a water safety plan in place since 2013. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for 2013. No personnel attended training in 2014. HWSMB has a partially developed management information system. Its billing operation is computerized.</p>																																		
Mission Statement	No mission statement.																																		
General Data About Water Utility	Connections : 10,770 Staff : 43 Annual O&M Costs : NRs21,597,078 Annual Collections : NRs29,086,615 Annual Billings : NRs24,633,381 Annual Capital Expenditure : NRs 7,489,893 Other Revenues: NRs4,048,190 Average capital expenditure/connection/year: NRs695.44 <p>Financial assistance was provided by the Hetauda Municipal Government and the Makwanpur District Development Committee for source development and distribution.</p>																																		
Tariff Structure	(Used in 2014) <table border="1"> <thead> <tr> <th>Pipe size (diameter)</th><th>½ " dia.</th><th>¾ " dia.</th><th>1 " dia.</th></tr> </thead> <tbody> <tr> <td>CHARGE CATEGORY</td><td></td><td></td><td></td></tr> <tr> <td>Minimum Charge</td><td></td><td></td><td></td></tr> <tr> <td>Minimum consumption (m³/month)</td><td>10</td><td>27</td><td>56</td></tr> <tr> <td>Minimum charge (NRs/month)</td><td>50.00</td><td>810.00</td><td>1,680.00</td></tr> <tr> <td></td><td></td><td></td><td></td></tr> <tr> <td>Additional Charge</td><td>(NRs/m³)</td><td>(NRs/m³)</td><td>(NRs/m³)</td></tr> <tr> <td>Additional charge beyond minimum</td><td>15.00</td><td>30.00</td><td>30.00</td></tr> </tbody> </table> <p>Notes:</p> <ol style="list-style-type: none"> 1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at HWSMB office. 2. There were 570 new connections in 2014. Price of new domestic connection is NRs7,365 payable prior to connection. 3. While no specific policy for serving the urban poor is in place, public taps are provided free of charge. 			Pipe size (diameter)	½ " dia.	¾ " dia.	1 " dia.	CHARGE CATEGORY				Minimum Charge				Minimum consumption (m ³ /month)	10	27	56	Minimum charge (NRs/month)	50.00	810.00	1,680.00					Additional Charge	(NRs/m ³)	(NRs/m ³)	(NRs/m ³)	Additional charge beyond minimum	15.00	30.00	30.00
Pipe size (diameter)	½ " dia.	¾ " dia.	1 " dia.																																
CHARGE CATEGORY																																			
Minimum Charge																																			
Minimum consumption (m ³ /month)	10	27	56																																
Minimum charge (NRs/month)	50.00	810.00	1,680.00																																
Additional Charge	(NRs/m ³)	(NRs/m ³)	(NRs/m ³)																																
Additional charge beyond minimum	15.00	30.00	30.00																																
Priority Need of Utility	1. Development of source of water. 2. Development of storage capacity. 3. Water treatment plants.																																		
Consumer Service	Average monthly consumption is about 16.4 m ³ per connection. The water bill averages NRs190.60 per month per connection. Water is available 3.5 hours a day to most users during dry months and 4.5 hours a day in the wet months. Average pressure at the tap is 2.0 meters. Applicants have to wait for about a day for new connections to be made. Connection fee is paid all at the start. About 30 out of 35 water samples taken during the year passed the residual chlorine test. There were 1,560 consumer complaints recorded and 1,284 leaks were repaired during the year. Consumers can complain in person at the water utility office or by telephone. The urban poor avail of the lowest priced block tariff for the smallest ½" diameter pipe connection.																																		
Performance Highlights	HWSMB provides water at 83 lpcd to its consumers for an average of 3.5 hours per day during the dry months and 4.5 hours per day in the wet months and to 83.3% of the population in its service area. NRW of 27.9% is near the bottom quartile. Production is not metered and consumption is only 95% metered making the NRW an estimate at best. Accounts receivable equivalent of 2.4 months needs some improvement while operating ratio of 0.88 and collection efficiency of 118.1% are good with the latter showing efforts at collecting past arrears. Average tariff of NRs11.65/m ³ is lower than the average but enough to cover O&M expenses. Staff/1000 connections ratio at 4.0 is in the top quartile. More efforts must be taken to collect bills in a timely manner. There is a need to increase water availability to more than 3-4 hours per day with backup generators as other service providers have done. HWSMB also needs to fully meter production and all its connections to have a more accurate determination of NRW to reduce it as appropriate. It needs to send staff to training courses to improve their skills and productivity.																																		

HETAUDA WATER SUPPLYPopulation: 70,000 ¹**Production/Distribution**

Average Daily Production	8,036 m ³ /d
Groundwater	75%
Surface Water	25%
Treatment Type ²	Pressure filter
Total water storage	3,250 m ³
Service Area ³	31.3 sq km
Distribution pipes	184.0 km

Service Connections

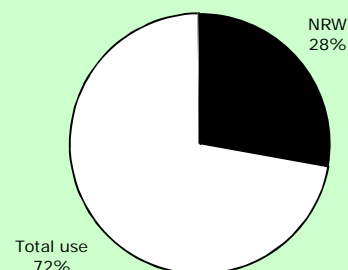
House (6.6 persons/HC)	10,597
Public Tap	22
Commercial	0
Industrial	0
Institutional	151
Other	0
Total	10,770

Service Indicators

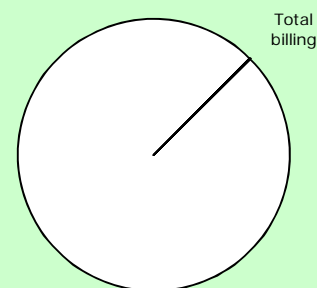
Service Coverage ⁴	83.3%
Water availability/day	3.5 hours in dry months 4.5 hours in wet months
Per Capita Consumption ⁵	83 l/c/d
Average Tariff	NRs11.65/m ³

Efficiency Indicators

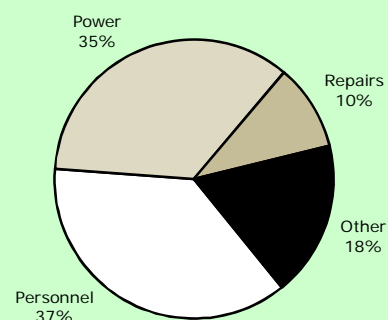
Non-Revenue Water ⁶	27.9%
Unit Production Cost	NRs7.36/m ³
Operating Ratio ⁷	0.88
Accounts Receivable	2.4 months
Staff/1,000 Connections	4.0

Notes:¹ The population is for the present area served by the utility.² Of 35 water samples taken in 2014, 30 passed the residual chlorine test.³ This is also the total area of responsibility.⁴ The population not served by the water utility draw water from other piped water service providers, tubewells, dug wells, springs, rivers and streams.⁵ This is based on the total consumption from all connections.⁶ There were 1,284 leaks repaired in 2014 while 1,674 meters were either replaced or repaired.⁷ Operating costs do not include debt service of NRs.2,000,000.⁸ No breakdowns were given for use and billing according to type of connection.⁹ Other costs include chemicals, transport and miscellaneous expenses.**Data as of 2012.**

Annual Water Use⁸
2,993,000 m³



Annual Water Billings⁸
NRs24,633,381



Annual O&M Costs⁹
NRs21,597,078

Water Utility	ITAHARI SMALL TOWN WATER SUPPLY AND SANITATION USERS ASSOCIATION																													
	Address : Ward No.4, Pani Tanki, Itahari, Sunsari District Telephone : +977 025 580758 Fax : +977 025 585758 E-mail : khanepaniitr@gmail.com Head : Ram Prasad Chaulagai, Chairman																													
	Itahari Small Town Water Supply and Sanitation Users Association (ISTWSSUA) became fully operational in 1996. It is legally registered with the District Water Resource Committee. ISTWSSUA is responsible for water supply for 15 urban and rural wards of Itahari Municipality and Hasposa, Ekamba and Pakali VDCs which has a total population of 120,000 people. Its present service area has a population density of 10,000 persons/km ² . It draws water from 6 tubewells 5 of which are currently operational. IWSSUA has a master development plan covering 2012 to 2017 and a water safety plan in place since 2011. The service provider has an annual report for 2014 that is available to the public. It has an audited financial report for the same year. No personnel attended training in 2014. ISTWSSUA has a partly developed management information system and a computerized billing system.																													
Mission Statement	No mission statement.																													
General Data About Water Utility	Connections : 10,069 Staff : 33 Annual O&M Costs : NRs21,385,749 Annual Collections : NRs23,557,637 Annual Billings : NRs22,493,024 Annual Capital Expenditure : NRs 1,802,546 Other Revenues: NRs14,077,752 Average capital expenditure/connection/year: NRs179.02 Itahari Small Town Water Supply and Sanitation Users Association did not receive any assistance from the government or any NGO in 2014.																													
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>House</th><th>Comm'l/Ind'l/Corp/Gov't</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>80.00</td><td>200.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td><td>(NRs/m³)</td></tr><tr><td>11 - 20 m³</td><td>13.00</td><td>15.00</td></tr><tr><td>21 - 30 m³</td><td>17.00</td><td>20.00</td></tr><tr><td>31 – 50 m³</td><td>20.00</td><td>25.00</td></tr><tr><td>More than 50 m³</td><td>24.00</td><td>30.00</td></tr></table> <p>Notes:</p> <ol style="list-style-type: none">1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.2. There were 1,414 new connections in 2014. Price of new domestic connection is NRs10,525 payable prior to connection.3. The poor which comprise 20% of the service area population are provided subsidies for connecting with house connections.			Category	House	Comm'l/Ind'l/Corp/Gov't	MINIMUM CHARGE	(NRs)	(NRs)	(First 10 m ³ or less)	80.00	200.00	ADDITIONAL CHARGE			Consumption (m ³)	(NRs/m ³)	(NRs/m ³)	11 - 20 m ³	13.00	15.00	21 - 30 m ³	17.00	20.00	31 – 50 m ³	20.00	25.00	More than 50 m ³	24.00	30.00
Category	House	Comm'l/Ind'l/Corp/Gov't																												
MINIMUM CHARGE	(NRs)	(NRs)																												
(First 10 m ³ or less)	80.00	200.00																												
ADDITIONAL CHARGE																														
Consumption (m ³)	(NRs/m ³)	(NRs/m ³)																												
11 - 20 m ³	13.00	15.00																												
21 - 30 m ³	17.00	20.00																												
31 – 50 m ³	20.00	25.00																												
More than 50 m ³	24.00	30.00																												
Priority Need of Utility	1. Additional deep boring. 2. Construction of office building. 3. Construction of at least 4 overhead tanks.																													
Consumer Service	Average monthly consumption is about 18.4 m ³ per connection. The water bill averages NRs186.16 per month per connection. Water is available 10 hours a day to most users in the dry months and 14 hours a day in the wet months. Average pressure at the tap is 6.0 meters. Applicants have to wait for 5 days for new connections to be made. Connection fee is paid all at the start. All of 30 water samples taken in 2014 passed the residual chlorine test except one sample. There were 270 consumer complaints recorded while 270 leaks were reported repaired during the year. Consumers can complain by telephone, letter and email. The service provider provides water to the poor through subsidized house connection fees.																													
Performance Highlights	ISTWSSUA provides water at 76 lpcd to its consumers for an average of 10 - 14 hours per day during the dry and wet months, respectively, to 66.7% of the population in its service area. NRW of 12.7% is outside the top quartile with both production and consumption fully metered. Financial management is good with an operating ratio of 0.95, accounts receivable equivalent of 0.2 month and 104.7% collection efficiency suggesting efforts in collecting past arrears. Average tariff of NRs10.09/m ³ is in the bottom quartile but enough to bring revenues to cover O&M expenses. Staff/1000 connections ratio is good at 3.3, the fifth lowest among the service providers. Additional investments may be needed to develop new sources and provide backup power to raise water availability to more than just 10 - 14 hours per day and to expand water services to more people. ISTWSSUA can further increase productivity and efficiency of its staff by sending them to appropriate training courses. The service provider should monitor residual chlorine according to the national drinking water quality standard.																													

ITAHARI WATER SUPPLY

Population: 100,000 ¹

Production/Distribution

Average Daily Production	6,993 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Pressure filter
Treated water storage	1,350 m ³
Service Area ³	10.0 sq km
Distribution pipes	322.0 km

Service Connections

House (8 persons/HC)	9,960
Public Tap	0
Commercial	0
Industrial	4
Institutional	105
Other	0
Total	10,069

Service Indicators

Service Coverage ⁴	66.7%
Water availability/day	10 hours in dry months 14 hours in wet months
Per Capita Consumption ⁵	76 l/c/d
Average Tariff	NRs10.09/m ³

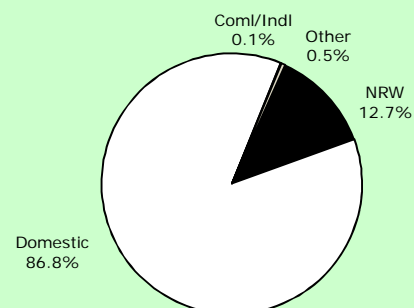
Efficiency Indicators

Non-Revenue Water ⁶	12.7%
Unit Production Cost	NRs8.38/m ³
Operating Ratio ⁷	0.95
Accounts Receivable	0.2 month
Staff/1,000 Connections	3.3

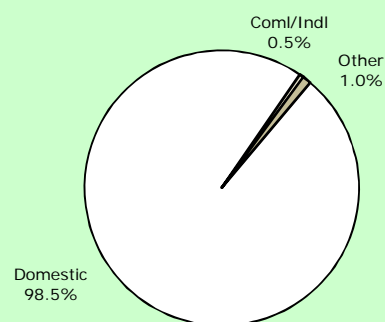
Notes:

- ¹ The population is for the present area served by the utility.
² Of 30 water samples taken in 2014, all passed the residual chlorine test except one.
³ This is also the original total area of responsibility.
⁴ The population not served by the water utility draw water from tubewells and dug wells.
⁵ This is based on the total consumption from all connections.
⁶ There were 270 leaks repaired in 2014 while 327 meters were either replaced or repaired.
⁷ Operating costs do not include debt service of NRs.13,397,700.
⁸ Other use and billing are for institutional connections.
⁹ Other costs include transport, chemicals and miscellaneous expenses.

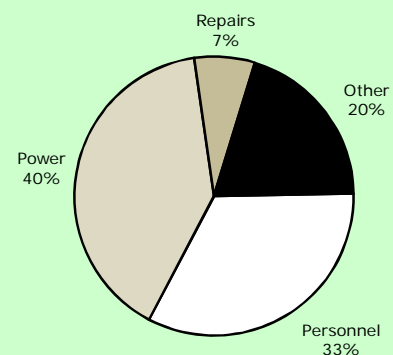
Data as of 2012.



Annual Water Use
2,552,494 m³



Annual Water Billings⁸
NRs22,493,024



Annual O&M Costs
NRs21,385,749

Water Utility	NEPAL WATER SUPPLY CORPORATION, JALESHWOR														
	Address : Ward No.2, Shankar Chowk, Jaleshwor Municipality, Mahottari District Telephone : +977 044 520089 Fax : none E-mail : nwscljaleshwor@gmail.com Head : Sunil Kumar Singh, Officer-in-charge														
	Nepal Water Supply Corporation, Jaleshwor (NWSC Jaleshwor) became fully operational in 1999. It is legally registered under the NWSC Act 1989. NWSC Jaleshwor is responsible for water supply for 8 urban wards of Jaleshwor Municipality which have a total population of 30,000 people. Its present service area has a population density of 893 persons/km ² . It draws water from 3 tubewells of which 2 are operational. It has no master development plan nor does it have a water safety plan in place. The service provider has a annual report for 2012 and an audited financial report for 2013. No personnel attended training in 2014. NWSC Jaleshwor has a partly developed management information system. None of its operations is computerized.														
Mission Statement	NWSC will provide an adequate supply of potable water and offer waste water system that will ensure health security. The management will aim to meet the needs of all customers in an efficient and effective manner at optimum cost.														
General Data About Water Utility	Connections : 561 Staff : 12 Annual O&M Costs : NRs4,412,000 Annual Collections : NRs1,780,979 Annual Billings : NRs1,630,783 Annual Capital Expenditure : NRs1,500,000 Other Revenues: NRs120,928 Average capital expenditure/connection/year: NRs2,673.80 Nepal Water Supply Corporation, Jaleshwor received financial assistance from the government for its distribution system in the past year.														
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>All Users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>110.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>More than 10 m³</td><td>25.00</td></tr></table> <p>Unmetered connections pay a flat rate of NRs560 per month.</p> <p>Notes:</p> <ol style="list-style-type: none">1. All consumers pay on metered use or flat rate. Consumers are billed monthly. Water bills are paid at the water service provider's office.2. There were 64 new connections in 2014. Price of new domestic connection is NRs4,175 payable prior to connection.3. The urban poor which comprise 20% of the service area population are provided with public taps with free water.			Category	All Users	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	110.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	More than 10 m ³	25.00
Category	All Users														
MINIMUM CHARGE	(NRs)														
(First 10 m ³ or less)	110.00														
ADDITIONAL CHARGE															
Consumption (m ³)	(NRs/m ³)														
More than 10 m ³	25.00														
Priority Need of Utility	1. Strong management of safe water supply. 2. Production of water according to water demand. 3. Laying of pipeline for all the people of Jaleshwor Municipality.														
Consumer Service	Average monthly consumption is about 23.2 m ³ per connection. The water bill averages NRs242.24 per month per connection. Water is available for 8.3 hours a day to most users during both the dry months and the wet months. Average pressure at the tap is 5 meters. Applicants have to wait for 7 days for new connections to be made. Connection fee is paid all at the start. No water samples were taken during the year for residual chlorine test. There were 20 consumer complaints recorded and 104 leaks repaired during the year. Consumers can complain in person at the water utility office or by telephone. The service provider provides free public tap water to the urban poor.														
Performance Highlights	NWSC Jaleshwor provides water at only 48 lpcd to its consumers for an average of 8.3 hours per day throughout the year to 29.8% of the population in its service area, the sixth lowest coverage. NRW of 30.1% is almost within the bottom quartile with production fully metered and consumption only 75.6% metered. Financial management needs improvement with operating ratio of 2.71 and the fifth highest accounts receivable equivalent of 5.5 months although collection efficiency of 109.2% suggests efforts at collecting arrears. Average tariff of NRs10.45/m ³ is at the lowest bottom quartile and not enough to cover operating expenses. Staff/1000 connections ratio at 21.4 is the second highest. NWSC Jaleshwor needs additional sources to provide more water to its customers and to expand coverage. The service provider needs to extend water availability to more than 8.3 hours per day. It has to increase tariff to adequately cover its O&M expenses and to collect bills on time. NWSC Jaleshwor should send more staff to training courses to develop their capacity and increase productivity. Monitoring of residual chlorine is necessary to check on the effectiveness of its chlorination measures.														

JALESHWOR WATER SUPPLYPopulation: 8,930 ¹**Production/Distribution**

Average Daily Production	612 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Chlorination
Treated water storage	450 m ³
Service Area ³	10.0 sq km
Distribution pipes	21.0 km

Service Connections

House (8 persons/HC)	520
Public Tap (100 persons/PT)	41
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	561

Service Indicators

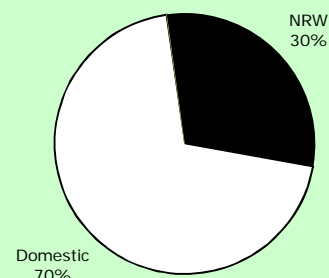
Service Coverage ⁴	29.8%
Water availability/day	8.3 hours in dry months
	8.3 hours in wet months
Per Capita Consumption ⁵	48 l/c/d
Average Tariff	NRs10.45/m ³

Efficiency Indicators

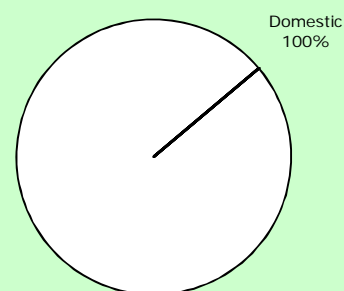
Non-Revenue Water ⁶	30.1%
Unit Production Cost	NRs19.77/m ³
Operating Ratio ⁷	2.71
Accounts Receivable	5.5 months
Staff/1,000 Connections	21.4

Notes:

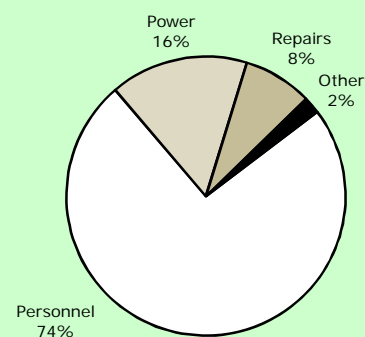
- ¹ The population is for the present area served by the utility.
- ² No water samples were taken in 2014 for residual chlorine test.
- ³ Total area of responsibility is 15.5 sq. km.
- ⁴ The population not served by the water utility draw water from tubewells.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 104 leaks repaired in 2014 while 10 meters were either replaced or repaired.
- ⁷ The water service provider had no debt service in 2014.
- ⁸ All use and billing were from domestic connections.
- ⁹ Other costs were for transport and chemicals.

Data as of 2014.

Annual Water Use⁸
223,200 m³



Annual Water Billings⁸
NRs1,630,783



Annual O&M Costs⁹
NRs4,412,000

Water Utility	KAKARVITTA WATER USERS AND SANITATION ASSOCIATION																										
	Address : Ward No.10, Bhanutole, Kakarvitta, Mechinagar, Jhapa District Telephone : +977 023 562027 Fax : none E-mail : kakarvittawatersupply@gmail.com Head : Gopal Tamang, Chairperson																										
	Kakarvitta Water Users and Sanitation Association (KWUSA) became fully operational in 1994. It is legally registered with the District Water Resource Committee. KWUSA is responsible for water supply for 7 urban and rural wards of Mechinagar municipality which has a total population of 40,000 people. Its present service area has a population density of 635 persons/km ² . It draws water from 11 tubewells all of which are currently operational. KWUSA has a master development plan covering 2012 to 2014 and a water safety plan in place since 2012. The service provider has an annual report for 2014 that is available to the public. It also has an audited financial report for the same year. Five of its personnel attended training in 2014 as part of SSTWSP. KWUSA has a well developed management information system and computerized billing and accounting systems.																										
Mission Statement	No mission statement.																										
General Data About Water Utility	Connections : 2,997 Staff : 19 Annual O&M Costs : NRs 9,752,252 Annual Collections : NRs13,883,687 Annual Billings : NRs13,883,687 Annual Capital Expenditure : NRs 268,405 Other Revenues: NRs499,559 Average capital expenditure/connection/year: NRs89.56 Kakarvitta Water Users and Sanitation Association received financial assistance from the national government and TDF for expansion and improvement of the water system.																										
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>½" connection</th></tr><tr><td></td><td>All users</td></tr><tr><td>MINIMUM CHARGE</td><td></td></tr><tr><td>First 5 m³ or less</td><td>NRs60.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>6 - 10 m³</td><td>15.00</td></tr><tr><td>11 - 30 m³</td><td>18.00</td></tr><tr><td>31 - 50 m³</td><td>21.00</td></tr><tr><td>51 - 80 m³</td><td>24.00</td></tr><tr><td>81 - 100 m³</td><td>27.00</td></tr><tr><td>More than 100 m³</td><td>30.00</td></tr></table> <p>Notes:</p> <ol style="list-style-type: none">1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.2. There were 136 new connections in 2014. Price of new domestic connection is NRs11,500 payable prior to connection.3. The poor which comprise 20% of the service area population are allowed to pay 50% of the connection fee by installment.			Category	½" connection		All users	MINIMUM CHARGE		First 5 m ³ or less	NRs60.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	6 - 10 m ³	15.00	11 - 30 m ³	18.00	31 - 50 m ³	21.00	51 - 80 m ³	24.00	81 - 100 m ³	27.00	More than 100 m ³	30.00
Category	½" connection																										
	All users																										
MINIMUM CHARGE																											
First 5 m ³ or less	NRs60.00																										
ADDITIONAL CHARGE																											
Consumption (m ³)	(NRs/m ³)																										
6 - 10 m ³	15.00																										
11 - 30 m ³	18.00																										
31 - 50 m ³	21.00																										
51 - 80 m ³	24.00																										
81 - 100 m ³	27.00																										
More than 100 m ³	30.00																										
Priority Need of Utility	1. Awareness on management. 2. Water supply round the clock. 3. Safe water distribution.																										
Consumer Service	Average monthly consumption is about 17.3 m ³ per connection. The water bill averages NRs386.04 per month per connection. Water is available 21 hours a day to most users in the dry months and 24 hours in the wet months. Average pressure at the tap is 10.0 meters. Applicants have to wait for 10 days for new connections to be made. Connection fee is paid all at the start. No water samples were taken in 2014 for residual chlorine test. There were 600 consumer complaints recorded while 20 leaks were reported repaired during the year. Consumers can complain in person at the water utility office, by telephone or by text messaging. The service provider provides water to the poor through community taps with installment paid connection fees.																										
Performance Highlights	KWUSA provides water at 59 lpcd to its consumers for an average of 21 - 24 hours per day during the dry and wet months, respectively, and to 72.5% of the population in its service area. NRW of 11.2% is in the top quartile among the lowest. Both production and consumption are fully metered. Financial management is good with operating ratio of 0.70, accounts receivable equivalent of 1.1 months and 100% collection efficiency. Average tariff of NRs22.33/m ³ is ninth highest, enough to raise revenues to cover O&M expenses. Staff/1000 connections ratio at 6.3 is better than the average. The service provider should expand its services to more people in its service area with more water to its customers. KWUSA should continue developing the capacity of its staff by sending them to appropriate training programs. It should monitor residual chlorine to check on the effectiveness of its chlorination measures following the national drinking water quality standards.																										

KAKARVITTA WATER SUPPLY

Population: 40,000 ¹

Production/Distribution

Average Daily Production	1,918 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Pressure filter
Treated water storage	1,325 m ³
Service Area ³	63.0 sq km
Distribution pipes	117.0 km

Service Connections

House (7 persons/HC)	2,980
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other (community taps)	17
Total	2,997

Service Indicators

Service Coverage ⁴	72.5%
Water availability/day	21 hours in dry months 24 hours in wet months
Per Capita Consumption ⁵	59 l/c/d
Average Tariff	NRs22.33/m ³

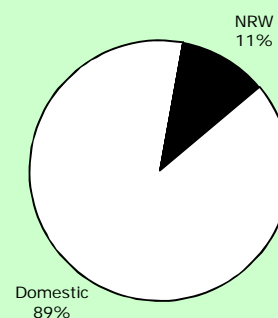
Efficiency Indicators

Non-Revenue Water ⁶	11.2%
Unit Production Cost	NRs13.93/m ³
Operating Ratio ⁷	0.70
Accounts Receivable	1.1 months
Staff/1,000 Connections	6.3

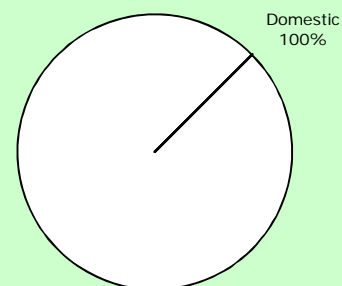
Notes:

- ¹ The population is for the present area served by the utility.
- ² No water samples were taken in 2014 for residual chlorine test.
- ³ This is also the total area of responsibility.
- ⁴ The population not served by the water utility draw water from tubewells, dug wells, streams, rivers and springs.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 20 leaks repaired in 2014 while 30 meters were either replaced or repaired.
- ⁷ The water service provider had no debt service in 2014.
- ⁸ All water use and billing are domestic including community taps.
- ⁹ Other costs include transport, chemicals and miscellaneous expenses.

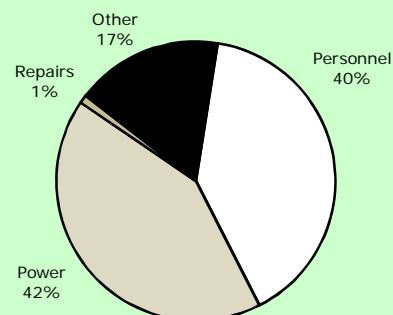
Data as of 2014.



Annual Water Use⁸
700,000 m³



Annual Water Billings
NRs13,883,687



Annual O&M Costs⁹
NRs9,752,252

Water Utility	KARMAIYA DRINKING WATER AND SANITATION USERS COMMITTEE																						
	Address : Ward No.4, Chauki Tole, Karmaiya, Bagmati, Sarlahi District Telephone : +977 984 4048991 Fax : none E-mail : none Head : Dol Raj Pandey, Chairperson																						
	Karmaiya Drinking Water and Sanitation Users Committee (KDWSUC) became fully operational in 1991. It is legally registered with the District Water Resource Committee. KDWSUC is responsible for water supply for 12 urban and rural wards of Karmaiya and Dhungrekhola VDCs which has a total population of 15,000 people. Its present service area has a population density of 406 persons/km ² . It draws water from 3 tubewells of which 2 are operational. It has no master development plan but a water safety plan is in place since 2013. The service provider has an annual report for 2014 that is available to the public and an audited financial report for the same year. No personnel attended any training in 2014. KDWSUC has a partly developed management information system. Accounting operations is computerized.																						
Mission Statement	No mission statement.																						
General Data About Water Utility	Connections : 1,296 Staff : 6 Annual O&M Costs : NRs2,964,941 Annual Collections : NRs2,754,772 Annual Billings : NRs2,486,864 Annual Capital Expenditure : NRs1,491,025 Other Revenues: NRs474,171 Average capital expenditure/connection/year: NRs1,150.48 Karmaiya Drinking Water and Sanitation Users Committee received financial assistance from WSSDO Malangawa and Sarlahi DDC for the purchase of a power generator.																						
Tariff Structure	(Used in 2014) <table><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 8 m³ or less)</td><td>105.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>9</td><td>15.00</td></tr><tr><td>10</td><td>10.00</td></tr><tr><td>11 - 15</td><td>20.00</td></tr><tr><td>16 - 20</td><td>30.00</td></tr><tr><td>20 - 25</td><td>35.00</td></tr><tr><td>More than 25 m³</td><td>45.00</td></tr></table> Notes: 1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office. 2. There were 97 new connections in 2014. Price of new domestic connection is only NRs5,130 payable prior to connection. 3. The urban poor who comprise 10% of the service area population receive no special tariff rates or connection charges.			MINIMUM CHARGE	(NRs)	(First 8 m ³ or less)	105.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	9	15.00	10	10.00	11 - 15	20.00	16 - 20	30.00	20 - 25	35.00	More than 25 m ³	45.00
MINIMUM CHARGE	(NRs)																						
(First 8 m ³ or less)	105.00																						
ADDITIONAL CHARGE																							
Consumption (m ³)	(NRs/m ³)																						
9	15.00																						
10	10.00																						
11 - 15	20.00																						
16 - 20	30.00																						
20 - 25	35.00																						
More than 25 m ³	45.00																						
Priority Need of Utility	1. Construction of new bore well. 2. Upgrading to new pipelines. 3. Fuel availability and cost.																						
Consumer Service	Average monthly consumption is about 11.9 m ³ per connection. The water bill averages NRs159.91 per month per connection. Water is available 6 hours a day to most users in the dry months and 7 hours per day in the wet months. Average pressure at the tap is 6 meters. Applicants have to wait for 7 days for new connections to be made. Connection fee is paid all at the start. No water samples were taken in 2014 for residual chlorine test. There were 60 consumer complaints recorded and 300 leaks repaired during the year. Consumers can complain in person at the water utility office and by telephone. The service provider has no policy for providing water service to the urban poor.																						
Performance Highlights	KDWSUC provides water at only 39 lpcd to its consumers for an average of 6 hours per day during the dry months and 7 hours per day in the wet months and to 86.7% of the population in its service area. NRW of 34.7% is the eighth highest. However, production is not metered although consumption is 99.8% metered making the NRW value an estimate at best. Financial management needs improvement with an operating ratio of 1.19 and accounts receivable equivalent of 4 months, also fourth highest, although collection efficiency of 110.8% suggests efforts to collect arrears. Average tariff of NRs13.44/m ³ is lower than the average and not enough to cover O&M expenses. Staff/1000 connections ratio at 4.6 is near the top quartile. KWSUC should increase tariffs to cover it operating expenses and collect them in time. Production needs to be metered to have a more accurate determination of NRW and to reduce it. It has to invest in the development of new sources to be able to provide more water to consumers and for longer periods per day. KDWSUC should train its staff to develop their capacity and monitor residual chlorine to check on the effectiveness of disinfection measures.																						

KARMAIYA WATER SUPPLY

Population: 13,000 ¹

Production/Distribution

Average Daily Production	776 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Chlorination
Raw water storage	450 m ³
Service Area ³	32.0 sq km
Distribution pipes	32.0 km

Service Connections

House (9 persons/HC)	1,276
Public Tap (106 persons/PT)	3
Commercial	0
Industrial	2
Institutional	15
Other	0
Total	1,296

Service Indicators

Service Coverage ⁴	86.7%
Water availability/day	6 hours in dry months 7 hours in wet months
Per Capita Consumption ⁵	39 l/c/d
Average Tariff	NRs13.44/m ³

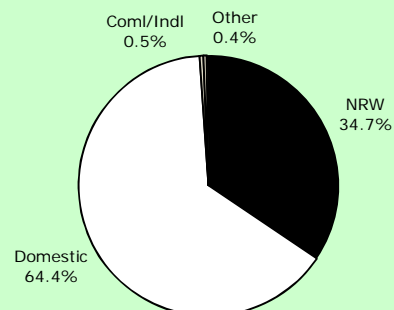
Efficiency Indicators

Non-Revenue Water ⁶	34.7%
Unit Production Cost	NRs10.47/m ³
Operating Ratio ⁷	1.19
Accounts Receivable	4.0 months
Staff/1,000 Connections	4.6

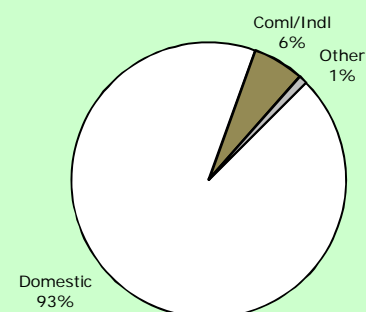
Notes:

- ¹ The population is for the present area served by the utility.
- ² No water samples were taken in 2014 for residual chlorine test.
- ³ The total area of responsibility is 35 sq km.
- ⁴ The population not served by the water utility draw water from dug wells, springs, rivers, streams.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 300 leaks repaired in 2014 while 165 meters were either replaced or repaired.
- ⁷ The water service provider had no debt service in 2014.
- ⁸ Other use and billing are for institutional connections.
- ⁹ Other costs are for miscellaneous expenses.

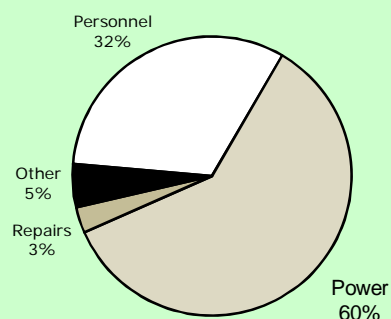
Data as of 2014.



Annual Water Use⁸
283,220 m³



Annual Water Billings⁸
NRs2,486,864



Annual O&M Costs⁹
NRs2,964,941

Water Utility	KAWASOTI WATER SUPPLY AND SANITATION USERS ASSOCIATION Address : Ward No.2, Shivmandir, Kawasoti Municipality, Nawalparasi District Telephone : +977 078 540404 Fax : +977 078 540210 E-mail : bgyawali_kw@yahoo.com Head : Vishnu Prasad Bhusal, Chairperson <p>Kawasoti Water Supply and Sanitation Users Association (KWSSUA) became fully operational in 2000. It is legally registered with the District Water Resource Committee. KWSSUA is responsible for water supply for 6 urban and rural wards of Kawasoti which has a total population of 53,000 people. Its present service area has a population density of 1,767 persons/km². It draws water from 2 spring intakes and 2 wells. It has no master development plan or a water safety plan in place. The service provider has an annual report for 2013 that is available to the public as well as an audited financial report for the same year. One personnel attended training in 2014. KWSSUA has a partly developed management information system. Its billing and accounting systems are computerized.</p>																																		
Mission Statement	No mission statement.																																		
General Data About Water Utility	Connections : 4,870 Staff : 20 Annual O&M Costs : NRs16,166,464 Annual Collections : NRs14,904,806 Annual Billings : NRs14,665,508 Annual Capital Expenditure : NRs 3,490,871 Other Revenues: NRs8,606,880 Average capital expenditure/connection/year: NRs716.81 <p>Kawasoti Water Supply and Sanitation Users Association received no assistance from the government, non governmental organizations nor funding agencies in the past year.</p>																																		
Tariff Structure	(Used in 2014) <table border="1"> <thead> <tr> <th>Category</th><th>House/Institutions</th><th>Category</th><th>Community Taps</th></tr> </thead> <tbody> <tr> <td>MINIMUM CHARGE</td><td>(NRs)</td><td>MINIMUM CHARGE</td><td>(NRs)</td></tr> <tr> <td>(First 10 m³ or less)</td><td>90.00</td><td>(First 30 m³ or less)</td><td>150.00</td></tr> <tr> <td>ADDITIONAL CHARGE</td><td></td><td>ADDITIONAL CHARGE</td><td></td></tr> <tr> <td>Consumption (m³)</td><td>(NRs/m³)</td><td>Consumption (m³)</td><td>(NRs/m³)</td></tr> <tr> <td>11 - 30</td><td>12.00</td><td>31 - 50</td><td>12.00</td></tr> <tr> <td>31 - 50</td><td>14.00</td><td>51 - 70</td><td>14.00</td></tr> <tr> <td>More than 50 m³</td><td>16.00</td><td>More than 70 m³</td><td>16.00</td></tr> </tbody> </table> <p>Notes:</p> <ol style="list-style-type: none"> All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office. There were 400 new connections in 2014. Price of new domestic connection is NRs15,925 payable prior to connection. The urban poor which comprise 8% of the service area population are allowed to pay connection fee in 24-month installment. 			Category	House/Institutions	Category	Community Taps	MINIMUM CHARGE	(NRs)	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	90.00	(First 30 m ³ or less)	150.00	ADDITIONAL CHARGE		ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	Consumption (m ³)	(NRs/m ³)	11 - 30	12.00	31 - 50	12.00	31 - 50	14.00	51 - 70	14.00	More than 50 m ³	16.00	More than 70 m ³	16.00
Category	House/Institutions	Category	Community Taps																																
MINIMUM CHARGE	(NRs)	MINIMUM CHARGE	(NRs)																																
(First 10 m ³ or less)	90.00	(First 30 m ³ or less)	150.00																																
ADDITIONAL CHARGE		ADDITIONAL CHARGE																																	
Consumption (m ³)	(NRs/m ³)	Consumption (m ³)	(NRs/m ³)																																
11 - 30	12.00	31 - 50	12.00																																
31 - 50	14.00	51 - 70	14.00																																
More than 50 m ³	16.00	More than 70 m ³	16.00																																
Priority Need of Utility	1. Spring source conservation. 2. Transmission pipes upgrading. 3. Overhead tank construction.																																		
Consumer Service	Average monthly consumption is about 16.6 m ³ per connection. The water bill averages NRs250.95 per month per connection. Water is available for 8 hours a day to most users in the dry months and 10 hours a day in the wet months. Average pressure at the tap is 8 meters. Applicants have to wait for 7 days for new connections to be made. Connection fee is paid all at the start. All 24 water samples taken in 2014 passed the residual chlorine test. There were 1,198 consumer complaints reported and 1,187 leaks repaired during the year. Consumers can complain in person at the water service provider's office. The service provider allows the urban poor to pay connection fees in 24-month installment.																																		
Performance Highlights	KWSSUA provides water at only 56 lpcd to its consumers for an average of 8 hours per day in the dry months and 10 hours per day in the wet months to 90.6% of the population in its service area. NRW of 23.5% is higher than the average with consumption 99.8% metered but none for production rendering the NRW value unreliable. Operating ratio at 1.10 and accounts receivable equivalent at 1.1 months both need some improvement although collection efficiency at 101.6% is good. Average tariff of NRs15.08/m ³ is just about average but is not enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 4.1 is among the lowest in the top quartile. KWSSUA will have to develop new sources to increase water supply to customers. It needs to extend water availability to more than 8-10 hours per day. It should also meter its production to have a better determination of its losses. KWSSUA should send its staff to training courses to develop their capacity and increase their productivity. It may have to increase its sampling for residual chlorine based on the national drinking water quality standards.																																		

KAWASOTI WATER SUPPLY

Population: 53,000 ¹

Production/Distribution

Average Daily Production	3,483 m ³ /d
Groundwater	17%
Surface Water	83%
Treatment Type ²	Sedimentation and filters
Treated water storage	1,100 m ³
Service Area ³	30.0 sq km
Distribution pipes	170.0 km

Service Connections

House (8.5 persons/HC)	4,752
Public Tap (50 persons/PT)	106
Commercial	0
Industrial	0
Institutional	12
Other	0
Total	4,870

Service Indicators

Service Coverage ⁴	90.6%
Water availability/day	8 hours in dry months 10 hours in wet months
Per Capita Consumption ⁵	56 l/c/d
Average Tariff	NRs15.08/m ³

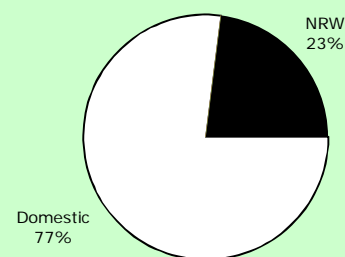
Efficiency Indicators

Non-Revenue Water ⁶	23.5%
Unit Production Cost	NRs12.72/m ³
Operating Ratio ⁷	1.10
Accounts Receivable	1.1 months
Staff/1,000 Connections	4.1

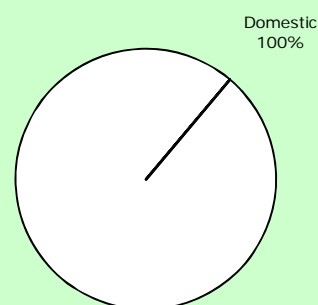
Notes:

- ¹ The population is for the present area served by the utility.
- ² All 24 water samples taken in 2014 passed the residual chlorine test.
- ³ This is also the total area of responsibility.
- ⁴ The population not served by the water utility draw water from other piped water service providers and dug wells.
- ⁵ This is based on the total consumption from all types of connections.
- ⁶ There were 1,187 leaks repaired in 2014 while 151 meters were either replaced or repaired.
- ⁷ Operating cost does not include debt service of NRs.5,657,558
- ⁸ Institutional use and billing are included under house connections.
- ⁹ Other costs include transport, chemicals and miscellaneous expenses.

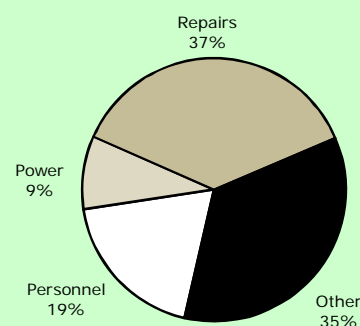
Data as of 2014.



Annual Water Use⁸
1,271,113 m³



Annual Water Billings⁸
NRs14,665,508



Annual O&M Costs
NRs16,166,464

Water Utility	KHAIRENITAR SMALL TOWN WATER SUPPLY AND SANITATION USERS ASSOCIATION																				
	Address : Ward No.10, Sangam Tole, Shuklagandaki Municipality, Tanahu District Telephone : +977 065 570720 Fax : +977 065 570720 E-mail : none Head : Mohan Bahadur Thapa, Chairperson																				
	Khairenitar Small Town Water Supply and Sanitation Users Association (KSTWSUA) became fully operational in 2005. It is legally registered with the District Water Resource Committee. KSTWSUA is responsible for water supply for 2 urban and rural wards of Khairenitar town in Shuklagandaki which has a total population of 9,500 people. Its present service area has a population density of 2,220 persons/km ² . It draws water from 3 spring intakes which are all operational. It has no master development plan but has a water safety plan in place since 2009. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. One personnel attended training in 2014. KSTWSUA has a partly developed management information system. Its billing system is computerized.																				
Mission Statement	No mission statement.																				
General Data About Water Utility	<div>Connections : 1,274</div> <div>Staff : 6</div> <div>Annual O&M Costs : NRs1,882,253</div> <div>Annual Collections : NRs3,871,323</div> <div>Annual Billings : NRs3,953,501</div> <div>Annual Capital Expenditure : NRs1,542,254</div> <div>Other Revenues: NRs1,076,359</div> <div>Average capital expenditure/connection/year: NRs1,210.56</div> <div>Khairenitar Small Town Water Supply and Sanitation Users Association received no assistance from the government nor from NGOs in the past year.</div>																				
Tariff Structure	<div>(Used in 2014)</div> <table><tr><th>Category</th><th>All Users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>120.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>11 - 15</td><td>15.00</td></tr><tr><td>16 - 20</td><td>18.00</td></tr><tr><td>21 - 25</td><td>25.00</td></tr><tr><td>More than 25 m³</td><td>30.00</td></tr></table> <div>Notes:<div>1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.</div><div>2. There were 36 new connections in 2014. Price of new domestic connection is NRs20,000 payable prior to connection.</div><div>3. The poor which comprise 2% of the service area population are provided with subsidized house connection charges on installments of 12-24 months.</div></div>			Category	All Users	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	120.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	11 - 15	15.00	16 - 20	18.00	21 - 25	25.00	More than 25 m ³	30.00
Category	All Users																				
MINIMUM CHARGE	(NRs)																				
(First 10 m ³ or less)	120.00																				
ADDITIONAL CHARGE																					
Consumption (m ³)	(NRs/m ³)																				
11 - 15	15.00																				
16 - 20	18.00																				
21 - 25	25.00																				
More than 25 m ³	30.00																				
Priority Need of Utility	<div>1. Source management.</div> <div>2. Additional reservoir.</div> <div>3. Distribution system management.</div>																				
Consumer Service	Average monthly consumption is about 15.2 m ³ per connection. The water bill averages NRs258.60 per month per connection. Water is available 6 hours a day to most users in the wet months and 3 hours a day in the dry months. Average pressure at the tap is 3 meters. Applicants have to wait for 7 days for new connections to be made. Connection fee is paid all at the start. No water samples were taken during the year for residual chlorine test. There were 590 consumer complaints recorded while the same number of leaks were repaired during the year. Consumers can complain in person at the water utility office or by telephone. The service provider connects the poor through house connections with subsidized connection fees paid in 12 to 24 month installments.																				
Performance Highlights	KSTWSUA provides water at 72 lpcd to its consumers for an average of 3 hours per day during the dry season and 6 hours per day in the wet season to 93.5% of the population in its service area. NRW of 14.1% is just outside the top quartile with consumption and production both fully metered. Financial management is good with operating ratio of 0.48, accounts receivable equivalent of 0.1 month and collection efficiency of 97.9%. Average tariff of NRs16.96/m ³ is just next to the top quartile covering operating expenses well. Staff/1000 connections ratio at 4.7 is good. There is a need to increase water availability to more than 8 hours per day by investing on a backup power supply. Additional sources may be needed to provide more water to customers and serve those not yet connected to the utility. KSTWSUA needs to monitor residual chlorine according to the national drinking water quality standards. It should continue training its staff for greater productivity.																				

KHAIRENITAR WATER SUPPLY

Population: 8,878 ¹

Production/Distribution

Average Daily Production	744 m ³ /d
Groundwater	Nil
Surface Water	100%
Treatment Type ²	Pressure & roughing filters
Treated water storage	400 m ³
Service Area ³	4.0 sq km
Distribution pipes	25.0 km

Service Connections

House (7 persons/HC)	1,274
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	1,274

Service Indicators

Service Coverage ⁴	93.5%
Water availability/day	3 hours in dry months 6 hours in wet months
Per Capita Consumption ⁵	72 l/c/d
Average Tariff	NRs16.96/m ³

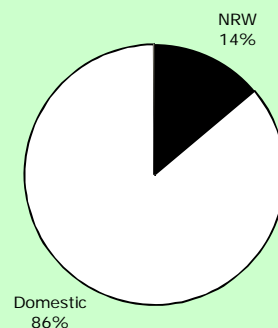
Efficiency Indicators

Non-Revenue Water ⁶	14.1%
Unit Production Cost	NRs6.93/m ³
Operating Ratio ⁷	0.48
Accounts Receivable	0.1 month
Staff/1,000 Connections	4.7

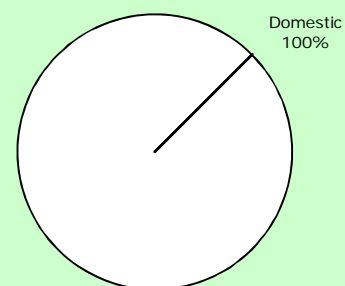
Notes:

- ¹ The population is for the present area served by the utility.
- ² No water samples were taken in 2014 for residual chlorine test.
- ³ This is also the original total area of responsibility.
- ⁴ The population not served by the water utility draw water from other piped water service providers, springs, rivers and streams.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 590 leaks repaired in 2014 while 35 meters were replaced and 35 were repaired.
- ⁷ All use and billings are for all connections which are all domestic.
- ⁸ Other costs include transport, chemicals and miscellaneous expenses.

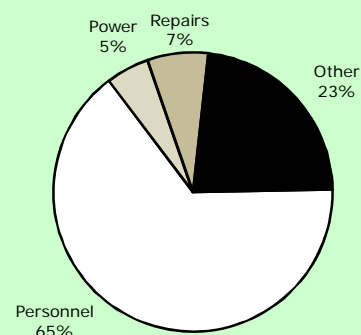
Data as of 2014.



Annual Water Use
271,515 m³



Annual Water Billings
NRs3,953,501



Annual O&M Costs
NRs1,882,253

KHAJURA WATER SUPPLY

Population: 3,200 ¹

Production/Distribution

Average Daily Production	450 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Chlorination
Treated water storage	225 m ³
Service Area ³	8.0 sq km
Distribution pipes	18.0 km

Service Connections

House (5 persons/HC)	578
Public Tap	0
Commercial	0
Industrial	0
Institutional	12
Other	0
Total	590

Service Indicators

Service Coverage ⁴	31.1%
Water availability/day	8 hours in dry months 8 hours in wet months
Per Capita Consumption ⁵	112 l/c/d
Average Tariff	NRs12.05/m ³

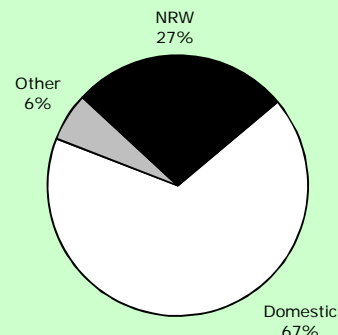
Efficiency Indicators

Non-Revenue Water ⁶	26.7%
Unit Production Cost	NRs8.49/m ³
Operating Ratio ⁷	0.96
Accounts Receivable	1.9 months
Staff/1,000 Connections	10.2

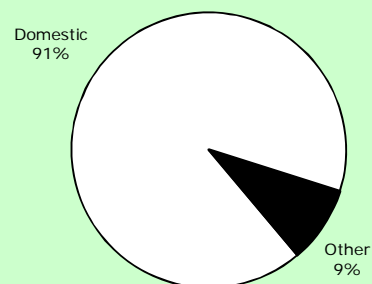
Notes:

- ¹ The population is for the present area served by the utility.
- ² No water samples were taken in 2014 for residual chlorine test.
- ³ Total area of responsibility is 13.0 sq. km.
- ⁴ The population not served by the water utility draw water from tubewells.
- ⁵ This is based on total consumption from all connections.
- ⁶ There were 139 leaks repaired in 2014 while 26 meters were either replaced or repaired.
- ⁷ The water service provider had no debt service in 2014.
- ⁸ Other use and billings are for institutional connections.
- ⁹ Other costs are miscellaneous expenses.

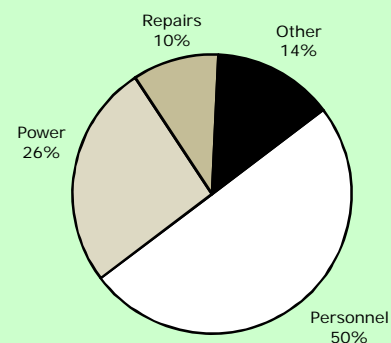
Data as of 2014.



Annual Water Use⁸
164,250 m³



Annual Water Billings⁸
NRs1,449,930



Annual O&M Costs
NRs1,394,956

Water Utility	NEPAL WATER SUPPLY CORPORATION, KRISHNANAGAR																
	Address : Ward No.2, Krishnanagar Municipality, Kapilvastu District Telephone : +977 076 520514 Fax : +977 076 520514 E-mail : nWSC.krishnanagar@gmail.com Head : Suresh Kumar Mahato, Officer-in-charge																
	Nepal Water Supply Corporation, Krishnanagar (NWSC Krishnanagar) became fully operational in 1999. It is legally registered under the NWSC Act 1989. NWSC Krishnanagar is responsible for water supply for 9 urban and rural wards of Krishnanagar Municipality which has a total population of 30,000 people. Its present service area has a population density of 4,500 persons/km ² . It draws water from 3 tubewells of which 2 are operational. It has no master development plan but has a water safety plan in place since 2013. The service provider has a annual report for 2012 and an audited financial report for the same year. One personnel attended training in 2014. NWSC Krishnanagar has a well developed management information system. None of its operations is computerized.																
Mission Statement	No mission statement.																
General Data About Water Utility	<div>Connections : 968</div> <div>Staff : 15</div> <div>Annual O&M Costs : NRs6,389,831</div> <div>Annual Collections : NRs2,567,534</div> <div>Annual Billings : NRs3,185,394</div> <div>Annual Capital Expenditure : NRs4,018,202</div> <div>Other Revenues: NRs100,840</div> <div>Average capital expenditure/connection/year: NRs4,151.03</div> <div>Nepal Water Supply Corporation, Krishnanagar received financial assistance from the government for its production and distribution systems in the past year.</div>																
Tariff Structure	<div>(Used in 2014)</div> <table><tr><th>Category</th><th>All Users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>50.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>More than 10 m³</td><td>15.00</td></tr><tr><td colspan="2">Unmetered connections pay a flat rate of NRs360 per month.</td></tr></table> <div>Notes:<div>1. All consumers pay on metered use or flat rate. Consumers are billed monthly. Water bills are paid at the water service provider's office.</div><div>2. There were 32 new connections in 2014. Price of new domestic connection is NRs4,275 payable prior to connection.</div><div>3. The urban poor which comprise 20% of the service area population are provided with public taps with free water.</div></div>			Category	All Users	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	50.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	More than 10 m ³	15.00	Unmetered connections pay a flat rate of NRs360 per month.	
Category	All Users																
MINIMUM CHARGE	(NRs)																
(First 10 m ³ or less)	50.00																
ADDITIONAL CHARGE																	
Consumption (m ³)	(NRs/m ³)																
More than 10 m ³	15.00																
Unmetered connections pay a flat rate of NRs360 per month.																	
Priority Need of Utility	<div>1. Pipeline extension.</div> <div>2. Tubewells construction.</div> <div>3. Water treatment plant.</div>																
Consumer Service	Average monthly consumption is about 34.9 m ³ per connection. The water bill averages NRs274.22 per month per connection. Water is available for 3 hours a day to most users during both the dry months and the wet months. Average pressure at the tap is 3 meters. Applicants have to wait for just a day for new connections to be made. Connection fee is paid all at the start. All 24 water samples taken during the year passed the residual chlorine test. There were 150 consumer complaints recorded and 40 leaks repaired during the year. Consumers can complain in person at the water utility office or by telephone. The service provider provides free public tap water to the urban poor.																
Performance Highlights	NWSC Krishnanagar provides water at 62 lpcd to its consumers for an average of only 3 hours per day throughout the year to 60% of the population in its service area. NRW of 26% is higher than the average with production not metered and consumption 93% metered. Financial management needs improvement with operating ratio of 2.01, accounts receivable equivalent of 1.7 months and collection efficiency of only 80.6%, the third lowest. Average tariff of NRs7.86/m ³ is seventh lowest and not enough to cover O&M expenses. Staff/1000 connections ratio at 15.5 is third highest. The service provider will have to do more for its consumers starting with adding new sources to provide more water, expand coverage and extend water availability to much more than just 3 hours per day. Tariffs will have to be increased to cover O&M expenses and all bills need to be collected on time. NWSC Krishnanagar should send more staff to training courses to develop their capacity. Residual chlorine should be monitored according to the national drinking water quality standards. Production need to be metered as well.																

KRISHNAGAR WATER SUPPLY

Population: 18,000 ¹

Production/Distribution

Average Daily Production	1,500 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Chlorination
Raw water storage	450 m ³
Service Area ³	4.0 sq km
Distribution pipes	12.0 km

Service Connections

House (14 persons/HC)	949
Public Tap (200 persons/PT)	19
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	968

Service Indicators

Service Coverage ⁴	60.0%
Water availability/day	3 hours in dry months 3 hours in wet months
Per Capita Consumption ⁵	62 l/c/d
Average Tariff	NRs7.86/m ³

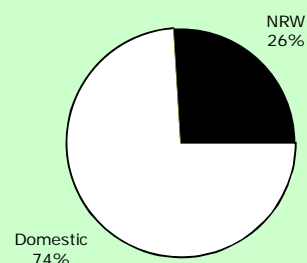
Efficiency Indicators

Non-Revenue Water ⁶	26.0%
Unit Production Cost	NRs11.67/m ³
Operating Ratio ⁷	2.01
Accounts Receivable	1.7 months
Staff/1,000 Connections	15.5

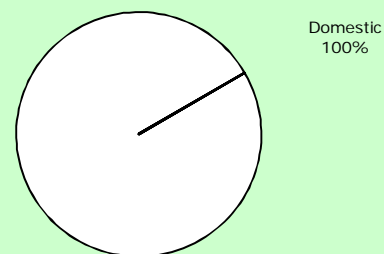
Notes:

- ¹ The population is for the present area served by the utility.
- ² All 24 water samples taken in 2014 passed the residual chlorine test.
- ³ This is also the area of responsibility.
- ⁴ The population not served by the water utility draw water from other piped water service providers and tube wells.
- ⁵ This is based on the total consumption for all connections.
- ⁶ There were 40 leaks repaired in 2014 while 30 meters were either replaced or repaired.
- ⁷ The water service provider had no debt service in 2014.
- ⁸ All use and billing are for domestic connections paying on metered use and flat rate.
- ⁹ Other costs include transport, chemicals and miscellaneous expenses.

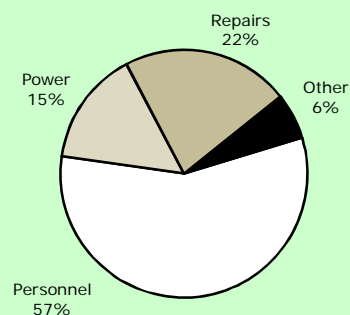
Data as of 2014.



Annual Water Use⁸
547,500 m³



Annual Water Billings⁸
NRs3,185,394



Annual O&M Costs
NRs6,389,831

Water Utility	LAKHANPUR WATER SUPPLY AND SANITATION USERS COMMITTEE																				
	Address : Ward No.1, Pathibhara Chowk, Lakhanpur, Jhapa District Telephone : +977 023 582176 Fax : none E-mail : none Head : Usha Bhandari, Chairperson																				
	Lakhanpur Water Supply and Sanitation Users Committee (LWSUC) became fully operational in 2008. It is legally registered with the District Water Resource Committee. LWSUC is responsible for water supply for 4 urban and rural wards of Lakhanpur which has a total population of 19,690 people. Its present service area has a population density of 480 persons/km ² . It draws water from 2 tubewells both of which are currently functioning. It has a master development plan covering 2012 to 2017 and a water safety plan prepared in 2012 but currently dormant. The service provider has an annual report for 2013 that is available to the public as well as an audited financial report for the same year. One personnel attended training provided by the WSSDO in 2014. LWSUC has no management information system. None of its operations is computerized.																				
Mission Statement	Water with WHO standard.																				
General Data About Water Utility	<div>Connections : 1,088</div> <div>Staff : 3</div> <div>Annual O&M Costs : NRs1,536,390</div> <div>Annual Collections : NRs1,845,207</div> <div>Annual Billings : NRs1,845,207</div> <div>Annual Capital Expenditure : Nil</div> <div>Other Revenues: NRs1,207,208</div> <div>Average capital expenditure/connection/year: Nil</div> <div>Lakhanpur Water Supply and Sanitation Users Committee received financial assistance from WSSDO for boring of tubewell in the past year.</div>																				
Tariff Structure	<div>(Used in 2012)</div> <table><tr><th>Category</th><th>All Users ½" connection</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 8 m³ or less)</td><td>90.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>9 – 20</td><td>13.00</td></tr><tr><td>21 – 30</td><td>15.00</td></tr><tr><td>31 - 40</td><td>17.00</td></tr><tr><td>More than 40 m³</td><td>20.00</td></tr></table> <div>Notes:<div>1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.</div><div>2. There were 132 new connections in 2014. Price of new domestic connection is NRs7,000 payable prior to connection.</div><div>3. The urban poor which comprise 13% of the service area population have no special rates for tariffs or connection charges.</div></div>			Category	All Users ½" connection	MINIMUM CHARGE	(NRs)	(First 8 m ³ or less)	90.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	9 – 20	13.00	21 – 30	15.00	31 - 40	17.00	More than 40 m ³	20.00
Category	All Users ½" connection																				
MINIMUM CHARGE	(NRs)																				
(First 8 m ³ or less)	90.00																				
ADDITIONAL CHARGE																					
Consumption (m ³)	(NRs/m ³)																				
9 – 20	13.00																				
21 – 30	15.00																				
31 - 40	17.00																				
More than 40 m ³	20.00																				
Priority Need of Utility	<div>1. Electricity problem.</div> <div>2. Construction of 250 cu m water reservoir.</div> <div>3. Compound wall for additional land.</div>																				
Consumer Service	Average monthly consumption is about 12.3 m ³ per connection. The water bill averages NRs141.33 per month per connection. Water is available 24 hours a day to most users in the wet months and as well as in the dry months. Average pressure at the tap is 9 meters. Applicants have to wait for one day only for new connections to be made. Connection fee is paid all at the start. Only 1 water sample was taken during the year and it passed the residual chlorine test. No consumer complaint was recorded in 2014 but 35 leaks were repaired. Consumers can complain by telephone. The service provider has no policy for providing water to the urban poor.																				
Performance Highlights	LWSUC provides water at 67 lpcd to its consumers for an average of 24hours per day in both the dry months and wet months to 33.2% of the population in its service area. NRW of 20% is higher than the average with production and consumption both 100% metered. Financial management is good with operating ratio of 0.83, collection efficiency of 100% and no accounts receivable. Average tariff of NRs11.48/m ³ is lower than the average but is enough to cover O&M expenses. Staff/1000 connections ratio at 2.8 is the third lowest showing good utilization of staff. There is a need to increase coverage to more people in its service area as well as the amount of water delivered to its customers. This will require the development of additional sources which could result in increase in tariff. LWSUC will have to monitor residual chlorine according to the national drinking water quality standards to check on the effectiveness of chlorination measures. With only three people, the service provider should continue developing the skills and capacity of its staff.																				

LAKHANPUR WATER SUPPLYPopulation: 19,690 ¹**Production/Distribution**

Average Daily Production	550 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Sedimentation, aeration & filters
Treated water storage	100 m ³
Service Area ³	41.0 sq km
Distribution pipes	42.0 km

Service Connections

House (6 persons/HC)	1,086
Public Tap	0
Commercial	0
Industrial	0
Institutional	2
Other	0
Total	1,088

Service Indicators

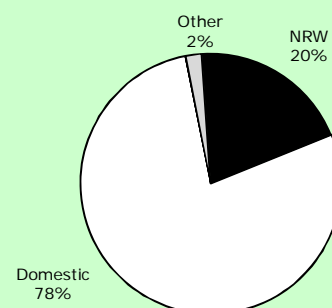
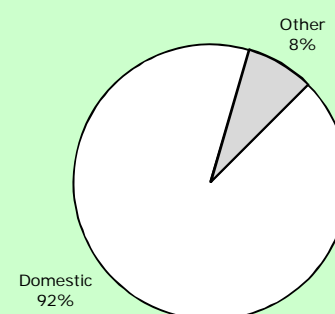
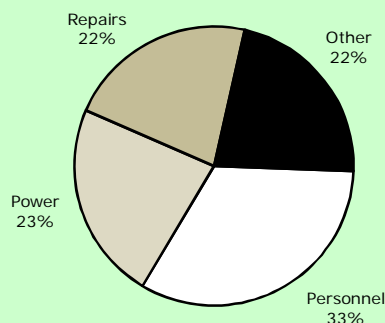
Service Coverage ⁴	33.2%
Water availability/day	24 hours in dry months 24 hours in wet months
Per Capita Consumption ⁵	67 l/c/d
Average Tariff	NRs11.48/m ³

Efficiency Indicators

Non-Revenue Water ⁶	20.0%
Unit Production Cost	NRs7.65/m ³
Operating Ratio ⁷	0.83
Accounts Receivable	Nil
Staff/1,000 Connections	2.8

Notes:

- ¹ The population is for the present area served by the utility.
² Only 1 water sample was taken in 2014 and it passed the residual chlorine test.
³ The total area of responsibility is 42.0 sq km.
⁴ The population not served by the water utility draw water from tubewells.
⁵ This is based on the total consumption from all connections.
⁶ There were 35 leaks repaired in 2014 while 30 meters were either replaced or repaired.
⁷ The water service provider has no debt service in 2014.
⁸ Other use and billing are for institutional connections.
⁹ Other costs include chemical and miscellaneous expenses.

Data as of 2014.**Annual Water Use⁸**
200,895 m³**Annual Water Billings**
NRs1,845,207**Annual O&M Costs⁹**
NRs1,536,390

170 *Nepal Water Service Providers Data Book, 2070 – 2071 (2013-2014)*

LAMAHI WATER SUPPLY

Population: 8,500 ¹

Production/Distribution

Average Daily Production	1,151 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Chlorination (occasional)
Raw water storage	164 m ³
Service Area ³	5.0 sq km
Distribution pipes	11.0 km

Service Connections

House (6.8 persons/HC)	1,248
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	1,248

Service Indicators

Service Coverage ⁴	49.8%
Water availability/day	8 hours in dry months 12 hours in wet months
Per Capita Consumption ⁵	95 l/c/d
Average Tariff	NRs14.29/m ³

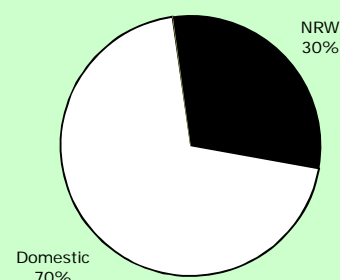
Efficiency Indicators

Non-Revenue Water ⁶	30.0%
Unit Production Cost	NRs7.12/m ³
Operating Ratio ⁷	0.71
Accounts Receivable	0.2 month
Staff/1,000 Connections	9.6

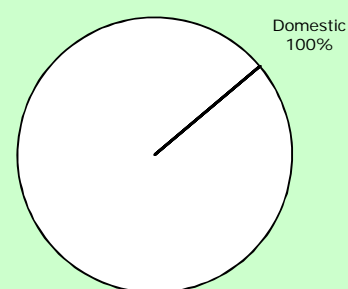
Notes:

- ¹ The population is for the present area served by the utility.
- ² No water samples were taken in 2014 for residual chlorine test.
- ³ This is also the total area of responsibility.
- ⁴ The population not served by the water utility draw water from tubewells and dug wells.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 30 leaks repaired in 2014 while 5 meters were either replaced or repaired.
- ⁷ The water service provider had no debt service in 2014.
- ⁸ All use and billing are for domestic connections.
- ⁹ Other costs are for transport expenses only.

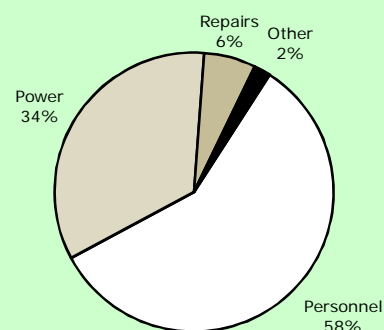
Data as of 2014.



Annual Water Use⁸
420,000 m³



Annual Water Billings⁸
NRs4,200,000



Annual O&M Costs⁹
NRs2,992,097

Water Utility	LEKHNATH SMALL TOWN WATER SUPPLY AND SANITATION USER COMMITTEE																													
	Address : Lekhnath – 12, Khudi Dungepatan, Kaski District Telephone : +977 061 561 295 Fax : +977 061 560 451 E-mail : lekhnathwatersupply@ymail.com Head : Mr Bodraj Lamichhane, Chairperson																													
	Lekhnath Small Town Water Supply and Sanitation User Committee (LSTWSSUC) became fully operational in 2008. It is responsible for water supply for 14 urban wards of Lekhnath which has a total population of 58,816 people. Its present service area has a population density of 950 persons/km ² . The WSSUC draws water from 6 river intakes of which 4 are currently functioning. It has no master development plan but has a water safety plan in place since 2009. LSTWSSUC has an annual report for 2014 that is available to the public as well as an audited financial report. Three personnel attended external training conducted by DWSS in 2014. LSTWSSUC has a well developed management information system with computerized billing and accounting systems.																													
Mission Statement	Safe water for each house is a sign of civilization. Let us keep our house, yard, colony clean ourselves.																													
General Data About Water Utility	Connections : 7,269 Staff : 26 Annual O&M Costs : NRs 9,142,794 Annual Collections : NRs19,426,669 Annual Billings : NRs19,941,053 Annual Capital Expenditure : NRs16,508,586 Other Revenues: NRs5,125,146 Average capital expenditure/connection/year: NRs2,271.09																													
	Technical, financial and institutional assistance were provided by the government (DWSS, TDF), international organizations (WHO, UN-HABITAT) and private sector partners (Maynilad Water Services, Inc., Philippines) for training, billing software development, water safety plan and laboratory development, and construction of filtration plant.																													
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>Private Users</th><th>Community Tap Users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>160.00</td><td>112.00</td></tr><tr><td>COMMODITY CHARGE</td><td></td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td><td>(NRs/m³)</td></tr><tr><td>11 - 20</td><td>19.00</td><td>13.00</td></tr><tr><td>21 - 30</td><td>23.00</td><td>16.00</td></tr><tr><td>More than 30 m³</td><td>26.00</td><td>18.00</td></tr><tr><td></td><td></td><td></td></tr></table> <p>Notes:</p> <ol style="list-style-type: none">All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at LSTWSSUC office and through banks.There were 781 new connections in 2014. Price of new domestic connection is NRs19,075 payable prior to connection.The urban poor which comprise 19% of the service area population are given 30% discount on tariff charges and connection fees and loans for connection charges.			Category	Private Users	Community Tap Users	MINIMUM CHARGE	(NRs)	(NRs)	(First 10 m ³ or less)	160.00	112.00	COMMODITY CHARGE			Consumption (m ³)	(NRs/m ³)	(NRs/m ³)	11 - 20	19.00	13.00	21 - 30	23.00	16.00	More than 30 m ³	26.00	18.00			
Category	Private Users	Community Tap Users																												
MINIMUM CHARGE	(NRs)	(NRs)																												
(First 10 m ³ or less)	160.00	112.00																												
COMMODITY CHARGE																														
Consumption (m ³)	(NRs/m ³)	(NRs/m ³)																												
11 - 20	19.00	13.00																												
21 - 30	23.00	16.00																												
More than 30 m ³	26.00	18.00																												
Priority Need of Utility	1. Leak detection equipment and professional training	2. Water testing laboratory and professional training	3. Training on water audit, distribution management and system analysis																											
Consumer Service	Average monthly consumption is about 12.9 m ³ per connection. The water bill averages NRs228.61 per month per connection. Water is available 14 hours a day to most users in both wet and dry months. Average pressure at the tap ranges from 1 to 10 meters. Applicants have to wait for about 2 days maximum for new connections to be made. Connection fee is paid all at the start. Ten out of 18 samples taken during the year passed the residual chlorine test. There were 240 consumer complaints recorded while 57 leaks were repaired during the year. Consumers can complain in person at the water utility or by telephone. Community taps serving the urban poor are given 30% discount on connection fees and tariff charges.																													
Performance Highlights	LSTWSSUC provides water at 68 lpcd to its consumers for an average of 14 hours per day throughout the year to 76.5% of the population in its service area. NRW of 31.5% is at the bottom quartile among the highest with both production and consumption fully metered. Financial management is good with operating ratio at 0.46 and accounts receivable equivalent of 0.7 month with collection efficiency of 97.4% that could still be improved. Average tariff of NRs17.74/m ³ is in the top quartile and more than enough to cover O&M expenses. Staff/1000 connections ratio is also good at 3.6 which is the seventh lowest. While financial management is good, consumers need to be provided with more water for longer hours per day. Availability also needs to be extended to more than 14 hours per day. LSTWSSUC may need to develop new sources and invest in a backup power generator to achieve these. NRW also needs to be reduced which can help in providing more water per capita and in extending services to more consumers. The service provider should continue to train its staff as well as monitor residual chlorine to make chlorination more effective.																													

LEKHNATH WATER SUPPLY

Population: 45,000 ¹

Production/Distribution

Average Daily Production	4,493 m ³ /d
Groundwater	5%
Surface Water	95%
Treatment Type ²	Sedimentation & pressure filter
Total water storage	2,000 m ³
Service Area ³	47.4 sq km
Distribution pipes	250.0 km

Service Connections

House (5.9 persons/HC)	7,184
Public Tap (31 persons/PT)	85
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	7,269

Service Indicators

Service Coverage ⁴	76.5%
Water availability/day	14 hours in dry months 14 hours in wet months
Per Capita Consumption ⁵	68 l/c/d
Average Tariff	NRs17.74/m ³

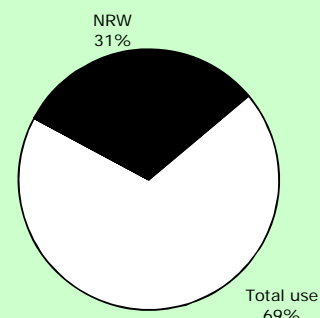
Efficiency Indicators

Non-Revenue Water ⁶	31.5%
Unit Production Cost	NRs5.58/m ³
Operating Ratio ⁷	0.46
Accounts Receivable	0.7 month
Staff/1,000 Connections	3.6

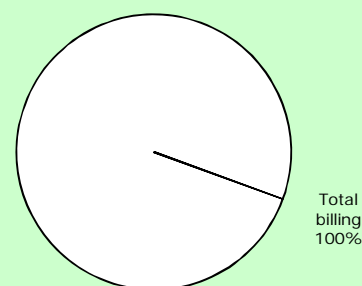
Notes:

- ¹ The population is for the present area served by the utility.
- ² Of 18 water samples taken in 2014, 10 passed the residual chlorine test.
- ³ This is also the total area of responsibility.
- ⁴ The population not served by the water utility draw water from other piped water service providers and tube wells.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 57 leaks repaired in 2014 while 154 meters were either replaced or repaired.
- ⁷ Operating cost does not include debt service of NRs.10,424,094.
- ⁸ Total use and billing are all from domestic connections.
- ⁹ Other costs include transport, chemicals and miscellaneous expenses.

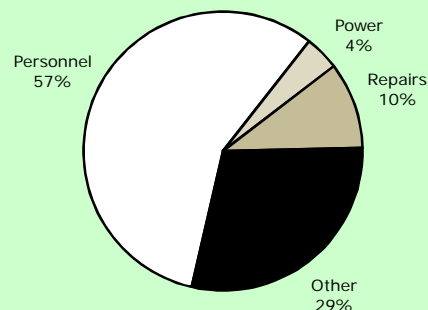
Data as of 2014.



Annual Water Use⁸
1,639,862 m³



Annual Water Billings⁸
NRs19,941,053



Annual O&M Costs⁹
NRs9,142,794

Water Utility	NEPAL WATER SUPPLY CORPORATION, MAHENDRANAGAR																
	Address : Ward No.4, Market, Mahendranagar Municipality, Kanchanpur District Telephone : +977 099 521133 Fax : +977 099 521133 E-mail : harishrestha211@gmail.com Head : Hari Kumar Shrestha, Officer-in-charge																
	Nepal Water Supply Corporation, Mahendranagar (NWSC Mahendranagar) became fully operational in 1999. It is legally registered under the NWSC Act 1989. NWSC Mahendranagar is responsible for water supply for 4 urban wards of Mahendranagar (formerly known as Bhimdutta) Municipality which has a total population of 37,247 people. Its present service area has a population density of 480 persons/km ² . It draws water from 5 tubewells of which 4 are operational. It has no master development plan but has a water safety plan in place since 2013. The service provider has a annual report for 2013 and an audited financial report for the same year. No personnel attended training in 2014. NWSC Mahendranagar has a partly developed management information system. None of its operations is computerized.																
Mission Statement	No mission statement.																
General Data About Water Utility	Connections : 1,867 Staff : 17 Annual O&M Costs : NRs7,188,969 Annual Collections : NRs4,388,551 Annual Billings : NRs4,376,515 Annual Capital Expenditure : NRs3,797,433 Other Revenues: NRs279,732 Average capital expenditure/connection/year: NRs2,033.98																
	Nepal Water Supply Corporation, Mahendranagar received financial assistance from the NWSC Head Office for its overall operations in the past year.																
Tariff Structure	<div>(Used in 2014)</div> <table><tr><th>Category</th><th>All Users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>110.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>More than 10 m³</td><td>25.00</td></tr><tr><td colspan="2">Unmetered connections pay a flat rate of NRs560 per month.</td></tr></table> <div>Notes: 1. All consumers pay on metered use or flat rate. Consumers are billed monthly. Water bills are paid at the water service provider's office. 2. There were 87 new connections in 2014. Price of new domestic connection is NRs4,275 payable prior to connection. 3. The urban poor which comprise 24% of the service area population are provided with public taps with free water paid directly by the Ministry of Finance.</div>			Category	All Users	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	110.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	More than 10 m ³	25.00	Unmetered connections pay a flat rate of NRs560 per month.	
Category	All Users																
MINIMUM CHARGE	(NRs)																
(First 10 m ³ or less)	110.00																
ADDITIONAL CHARGE																	
Consumption (m ³)	(NRs/m ³)																
More than 10 m ³	25.00																
Unmetered connections pay a flat rate of NRs560 per month.																	
Priority Need of Utility	1. Improve production and distribution systems. 2. Water quality testing facility. 3. Extension of pipeline to address users' demand.																
Consumer Service	Average monthly consumption is about 21.6 m ³ per connection. The water bill averages NRs195.35 per month per connection. Water is available for 8.5 hours a day to most users during the dry months and 7.5 hours a day in the wet months. Average pressure at the tap is only a meter. Applicants have to wait for 7 days for new connections to be made. Connection fee is paid all at the start. Of 338 water samples taken during the year 321 passed the residual chlorine test. There were 342 consumer complaints recorded and 105 leaks repaired during the year. Consumers can complain in person at the water utility office, by telephone or by writing a letter. The service provider provides free public tap water to the urban poor but paid directly to NWSC by Ministry of Finance.																
Performance Highlights	NWSC Mahendranagar provides water at 111 lpcd to its consumers for an average of 8.5 hours per day in the dry months and 7.5 hours per day in the wet months to 32.2% of the population in its service area. NRW of 15.5% is better than average with production fully metered and consumption only 83.3% metered. Financial management is mixed with operating ratio at 1.64 needing improvement while accounts receivable equivalent of 0.5 month and collection efficiency of 100.3% are both good. Average tariff of NRs9.03/m ³ is in the bottom quartile among the lowest and is not enough to cover operating expenses. Staff/1000 connections ratio at 9.1 is in the bottom quartile. While providing adequate supply to consumers, the service provider will have to extend water availability to more than just 8.5 hours per day and extend services to 2/3 of the population in the service area. The service provider may have to develop new sources and install power generators in the system. Tariff will have to be increased to cover these investments and to cover O&M expenses. NWSC Mahendranagar should send its staff to training courses to develop their capacity and increase their productivity.																

MAHENDRANAGAR NWSC WATER SUPPLY

Population: 12,000 ¹

Production/Distribution

Average Daily Production	1,572 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Slow sand filter
Treated water storage	480 m ³
Service Area ³	25.0 sq km
Distribution pipes	39.0 km

Service Connections

House (6 persons/HC)	1,728
Public Tap (35.5 persons/PT)	27
Commercial	0
Industrial	0
Institutional	112
Other	0
Total	1,867

Service Indicators

Service Coverage ⁴	32.2%
Water availability/day	8.5 hours in dry months 7.5 hours in wet months
Per Capita Consumption ⁵	111 l/c/d
Average Tariff	NRs9.03/m ³

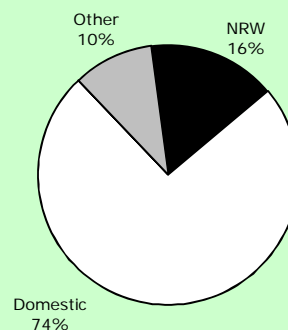
Efficiency Indicators

Non-Revenue Water ⁶	15.5%
Unit Production Cost	NRs12.53/m ³
Operating Ratio ⁷	1.64
Accounts Receivable	0.5 month
Staff/1,000 Connections	9.1

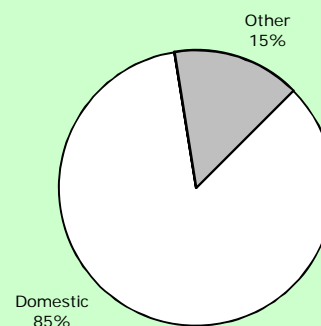
Notes:

- ¹ The population is for the present area served by the utility.
- ² Of 338 water samples taken in 2014, 321 passed the residual chlorine test.
- ³ The original area of responsibility was 171 sq. km.
- ⁴ The population not served by the water utility draw water from other piped water service providers and tubewells.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 105 leaks repaired in 2014 while 237 meters were either replaced or repaired.
- ⁷ The water service provider had no debt service in 2014.
- ⁸ Other use is for institutional connections and public taps.
- ⁹ Other billing is for institutional connections. Public tap billing is paid by MoF to NWSC.
- ¹⁰ Other costs include transport, chemicals and miscellaneous expenses.

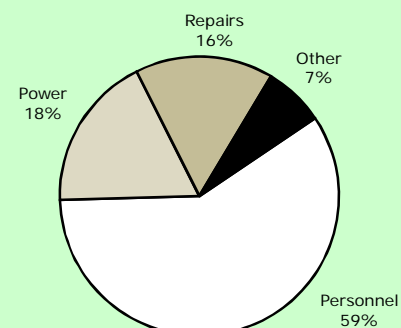
Data as of 2014.



Annual Water Use⁸
573,796 m³



Annual Water Billings⁹
NRs4,376,515



Annual O&M Costs¹⁰
NRs7,188,969

Water Utility	MAHENDRANAGAR WATER USERS AND SANITATION ASSOCIATION																				
	Address : Ward No.8, Janaki Tole, Mahendranagar Municipality, Kanchanpur District Telephone : +977 099 690028 Fax : none E-mail : none Head : Afilal Joshi, Chairperson Mahendranagar Water Users and Sanitation Association (MWUSA) became fully operational in 2007. It is legally registered with the District Water Resource Committee. MWUSA is responsible for water supply for 4 urban and rural wards of Mahendranagar which has a total population of 15,000 people. Its present service area has a population density of 1,250 persons/km ² . It draws water from 2 tubewells both of which are operational. It has neither a master development plan nor a water safety plan in place. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. No personnel attended training in 2014. MWUSA has a partly developed management information system and its billing system is computerized.																				
Mission Statement	No mission statement.																				
General Data About Water Utility	Connections : 2,020 Staff : 11 Annual O&M Costs : NRs2,709,294 Annual Collections : NRs2,334,944 Annual Billings : NRs2,768,000 Annual Capital Expenditure : Nil Other Revenues: NRs342,511 Average capital expenditure/connection/year: Nil Mahendranagar Water Users and Sanitation Association received no assistance from the government, non government organizations or funding agencies in the past year.																				
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>House/Institutions</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 8 m³ or less)</td><td>100.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>9 - 10</td><td>15.00</td></tr><tr><td>11 - 15</td><td>20.00</td></tr><tr><td>More than 15 m³</td><td>25.00</td></tr><tr><td></td><td></td></tr></table> <p>Notes:</p> <p>1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.</p> <p>2. There were 75 new connections in 2014. Price of new domestic connection is NRs3,960 payable prior to connection.</p> <p>3. The urban poor which comprise 20% of the service area population can get a loan from a micro finance program to fund connection fees and pay in installment.</p>			Category	House/Institutions	MINIMUM CHARGE	(NRs)	(First 8 m ³ or less)	100.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	9 - 10	15.00	11 - 15	20.00	More than 15 m ³	25.00		
Category	House/Institutions																				
MINIMUM CHARGE	(NRs)																				
(First 8 m ³ or less)	100.00																				
ADDITIONAL CHARGE																					
Consumption (m ³)	(NRs/m ³)																				
9 - 10	15.00																				
11 - 15	20.00																				
More than 15 m ³	25.00																				
Priority Need of Utility	1. Lime control in pipes. 2. New bore well. 3. Electric power generator.																				
Consumer Service	Average monthly consumption is about 10.6 m ³ per connection. The water bill averages NRs114.19 per month per connection. Water is available for 10 hours a day to most users in the dry months and 8 hours a day in the wet months. Average pressure at the tap is 4 meters. Applicants have to wait for 2 days for new connections to be made. Connection fee is paid all at the start. No water samples were taken in 2014 for residual chlorine test. There were 1,050 consumer complaints reported and 1,530 leaks repaired during the year. Consumers can complain in person at the water service provider's office, by telephone or by writing a letter. The urban poor can pay connection fees by installment and from a loan from a micro finance program.																				
Performance Highlights	MWUSA provides water at 70 lpcd to its consumers for an average of 10 hours per day during the dry months and 8 hours per day in the wet months to 66.7% of the population in its service area. NRW of 21% is just about average with production fully metered but consumption only 59.4% metered rendering the NRW value unreliable. Operating ratio is acceptable at 0.98, but accounts receivable equivalent at 1.9 months and collection efficiency at 84.4%, the fourth lowest, both need improvement. Average tariff of NRs10.81/m ³ is barely enough to cover O&M costs. Staff/1000 connections ratio at 5.4 is good and lower than the average. MWUSA may have to develop new sources to increase water supply to customers and expand coverage. It should consider installing power generators to extend water availability to more than just 10 hours per day. It should also meter all its connections to have a better determination of its losses to be able to reduce NRW properly. MWUSA should send its staff to training courses to develop their capacity and increase their productivity. Residual chlorine should be monitored according to the national drinking water quality standards to check on the effectiveness of its disinfection measures.																				

MAHENDRANAGAR WUSA WATER SUPPLY

Population: 10,000 ¹

Production/Distribution

Average Daily Production	888 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Chlorination
Raw water storage	450 m ³
Service Area ³	8.0 sq km
Distribution pipes	59.0 km

Service Connections

House (5 persons/HC)	2,000
Public Tap	0
Commercial	0
Industrial	0
Institutional	20
Other	0
Total	2,020

Service Indicators

Service Coverage ⁴	66.7%
Water availability/day	10 hours in dry months 8 hours in wet months
Per Capita Consumption ⁵	70 l/c/d
Average Tariff	NRs10.81/m ³

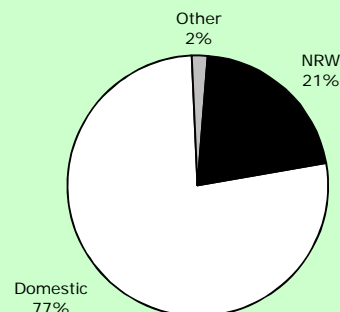
Efficiency Indicators

Non-Revenue Water ⁶	21.0%
Unit Production Cost	NRs8.36/m ³
Operating Ratio ⁷	0.98
Accounts Receivable	1.9 months
Staff/1,000 Connections	5.4

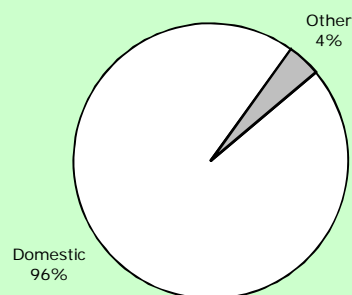
Notes:

- ¹ The population is for the present area served by the utility.
- ² No water samples were taken in 2014 for residual chlorine test.
- ³ Total area of responsibility is 10.0 sq. km.
- ⁴ The population not served by the water utility draw water from tubewells and dug well.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 1,530 leaks repaired in 2014 while 800 meters were either replaced or repaired.
- ⁷ The water service provider had no debt service in 2014.
- ⁸ Other use and billing are for institutional connections.
- ⁹ Other costs are for chemical and miscellaneous expenses.

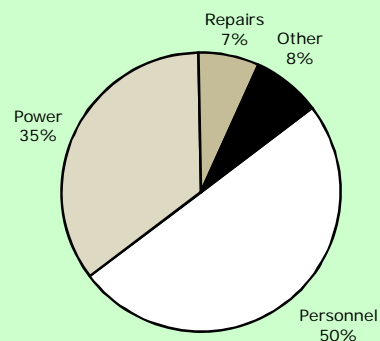
Data as of 2014.



Annual Water Use⁸
324,000 m³



Annual Water Billings⁸
NRs2,768,000



Annual O&M Costs
NRs2,709,294

Water Utility	BIRAT/MANGADH WATER SUPPLY AND SANITATION USERS COMMITTEE																						
	Address : Ward No.4, Pushpalal Chowk,Mangadh, Biratnagar, Morang District Telephone : +977 021 421287 Fax : +977 021 420914 E-mail : mangadhwusc@gmail.com Head : Ram Bahadur Ghimire, Chairman																						
	Birat/Mangadh Water Supply and Sanitation Users Committee (B/MWSSUC) became fully operational in 2005. It is legally registered with the District Water Resource Committee. B/MWSSUC is responsible for water supply for 10 urban and rural wards of Biratnagar and Tanki and Baijanathpur VDCs which have a total population of 66,766 people. Its present service area has a population density of 1,833 persons/km ² . It draws water from 3 tubewells of which 2 are operational. It has a master development plan covering 2013 to 2025 and a water safety plan in place since 2011. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for 2013. Seven personnel attended training provided by DWSS and JICA in 2014. B/MWSSUC has a partly developed management information system. Its accounting, pumping and water treatment operations are computerized.																						
Mission Statement	To make project sustainable and manageable by making appropriate policy, strategy and collecting resources for reliable service.																						
General Data About Water Utility	<table><tr><td>Connections</td><td>: 3,258</td><td></td></tr><tr><td>Staff</td><td>: 12</td><td></td></tr><tr><td>Annual O&M Costs</td><td>: NRs8,179,954</td><td></td></tr><tr><td>Annual Collections</td><td>: NRs9,338,985</td><td>Other Revenues: NRs9,742,115</td></tr><tr><td>Annual Billings</td><td>: NRs9,681,542</td><td></td></tr><tr><td>Annual Capital Expenditure</td><td>: NRs8,123,316</td><td>Average capital expenditure/connection/year: NRs2,493.34</td></tr></table> <p>Birat/Mangadh Water Supply and Sanitation Users Committee received no technical, financial and institutional assistance from the government or NGOs in the past year.</p>			Connections	: 3,258		Staff	: 12		Annual O&M Costs	: NRs8,179,954		Annual Collections	: NRs9,338,985	Other Revenues: NRs9,742,115	Annual Billings	: NRs9,681,542		Annual Capital Expenditure	: NRs8,123,316	Average capital expenditure/connection/year: NRs2,493.34		
Connections	: 3,258																						
Staff	: 12																						
Annual O&M Costs	: NRs8,179,954																						
Annual Collections	: NRs9,338,985	Other Revenues: NRs9,742,115																					
Annual Billings	: NRs9,681,542																						
Annual Capital Expenditure	: NRs8,123,316	Average capital expenditure/connection/year: NRs2,493.34																					
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>All Users ½" connection</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>115.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>11 – 15</td><td>18.00</td></tr><tr><td>16 – 20</td><td>20.00</td></tr><tr><td>21 – 30</td><td>22.00</td></tr><tr><td>31 - 40</td><td>25.00</td></tr><tr><td>More than 40 m³</td><td>30.00</td></tr></table> <p>Notes:</p> <ol style="list-style-type: none">1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.2. There were 221 new connections in 2014. Price of new domestic connection is NRs1,250 payable prior to connection.3. The urban poor which comprise 5% of the service area population are given 25% - 75% discount on connection charges.			Category	All Users ½" connection	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	115.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	11 – 15	18.00	16 – 20	20.00	21 – 30	22.00	31 - 40	25.00	More than 40 m ³	30.00
Category	All Users ½" connection																						
MINIMUM CHARGE	(NRs)																						
(First 10 m ³ or less)	115.00																						
ADDITIONAL CHARGE																							
Consumption (m ³)	(NRs/m ³)																						
11 – 15	18.00																						
16 – 20	20.00																						
21 – 30	22.00																						
31 - 40	25.00																						
More than 40 m ³	30.00																						
Priority Need of Utility	<table><tr><td>1. New tubewells and rehabilitation of existing ones.</td><td>2. Water treatment facilities and reservoirs.</td><td>3. Water quality testing laboratory.</td></tr></table>			1. New tubewells and rehabilitation of existing ones.	2. Water treatment facilities and reservoirs.	3. Water quality testing laboratory.																	
1. New tubewells and rehabilitation of existing ones.	2. Water treatment facilities and reservoirs.	3. Water quality testing laboratory.																					
Consumer Service	Average monthly consumption is about 15.3 m ³ per connection. The water bill averages NRs247.64 per month per connection. Water is available 10 hours a day to most users during both the wet months and the dry months. Average pressure at the tap is 10 meters. Applicants have to wait for 7 - 10 days for new connections to be made. Connection fee is paid all at the start. All 465 water samples taken during the year passed the residual chlorine test. There were 607 consumer complaints recorded while 607 leaks were repaired during the year. Consumers can complain in person at the water utility office or by telephone. The service provider provides water to the urban poor with 25% to 75% discount on connection charges.																						
Performance Highlights	B/MWSSUC provides water at only 56 lpcd to its consumers for an average of 10 hours per day during both dry and wet months to 43.9% of the population in its service area. NRW of 12% is in the top quartile, among the lowest, with both production and consumption fully metered. Financial management is good with operating ratio at 0.84, accounts receivable equivalent of 0.4 month although collection efficiency of 96.5% needs some improvement. Average tariff of NRs16.17/m ³ is a little above average and enough to cover O&M costs. Staff/1000 connections ratio at 3.7 is good at ninth lowest. B/MWSSUC needs to develop new sources to provide more water to its consumers and expand services to more than half of its service area population. It should extend availability to more than 10 hours per day with the installation of power generators. The service provider should continue training of its staff to develop their skills.																						

MANGADH WATER SUPPLY

Population: 29,322 ¹

Production/Distribution

Average Daily Production	1,865 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Pressure filter & aeration
Treated water storage	750 m ³
Service Area ³	16.0 sq km
Distribution pipes	60.0 km

Service Connections

House (8 persons/HC)	3,235
Public Tap	0
Commercial	0
Industrial	0
Institutional	23
Other	0
Total	3,258

Service Indicators

Service Coverage ⁴	43.9%
Water availability/day	10 hours in dry months 10 hours in wet months
Per Capita Consumption ⁵	56 l/c/d
Average Tariff	NRs16.17/m ³

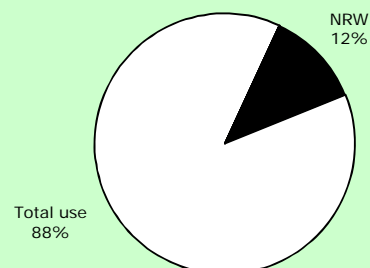
Efficiency Indicators

Non-Revenue Water ⁶	12.0%
Unit Production Cost	NRs12.02/m ³
Operating Ratio ⁷	0.84
Accounts Receivable	0.4 month
Staff/1,000 Connections	3.7

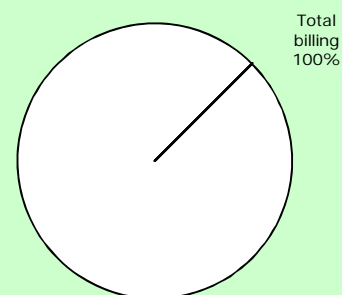
Notes:

- ¹ The population is for the present area served by the utility.
- ² All 465 water samples taken in 2014 passed the residual chlorine test.
- ³ The total area of responsibility is 20.0 sq km.
- ⁴ The population not served by the water utility draw water from tubewells and dug wells.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 607 leaks repaired in 2014 while 64 meters were either replaced or repaired.
- ⁷ The water service provider has no debt service in 2014.
- ⁸ Total use and billings are for house connections and a few institutional connections.
- ⁹ Other costs include chemical and miscellaneous expenses.

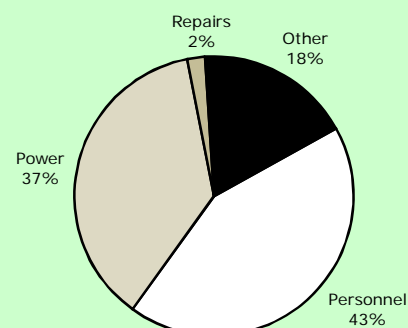
Data as of 2014.



Annual Water Use⁸
680,549 m³



Annual Water Billings⁸
NRs9,681,542



Annual O&M Costs⁹
NRs8,179,954

Water Utility	NAYAGAUN WATER SUPPLY USERS AND SANITATION ASSOCIATION																							
	Address : Ward No.14, Nayagaun, Butwal Municipality, Rupandehi District Telephone : +977 071 445 093 Fax : none E-mail : nayagaun_khanepani@gmail.com Head : Sabitra Regmi, Chairperson																							
Nayagaun Water Supply Users and Sanitation Association (NWSUSA) became fully operational in 2008. It is legally registered with the District Water Resource Committee. NWSUSA is responsible for water supply for 2 urban and rural wards of Butwal Municipality which has a total population of 25,000 people. Its present service area has a population density of 2,011 persons/km ² . It draws water from 3 wells all of which are currently operational. It has a master development plan covering 2014 to 2016 but no water safety plan in place. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. No personnel attended training in 2014. NWSUSA has a partly developed management information system and its billing and accounting systems are computerized.																								
Mission Statement	No mission statement.																							
General Data About Water Utility	Connections : 2,234																							
	Staff : 8																							
	Annual O&M Costs : NRs6,203,654		Other Revenues: NRs7,298,709																					
	Annual Collections : NRs6,181,343																							
	Annual Billings : NRs6,411,902		Average capital expenditure/connection/year: Nil																					
	Annual Capital Expenditure : Nil																							
Nayagaun Water Supply Users and Sanitation Association has not received any assistance from the government and non government organizations in recent years.																								
Tariff Structure	(Used in 2014)																							
	<table><tr><th>Category</th><th>All Users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>80.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>11 - 20</td><td>12.00</td></tr><tr><td>21 - 30</td><td>17.00</td></tr><tr><td>31 - 40</td><td>23.00</td></tr><tr><td>41 - 60</td><td>28.00</td></tr><tr><td>61 - 80</td><td>35.00</td></tr><tr><td>More than 80 m³</td><td>40.00</td></tr></table>			Category	All Users	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	80.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	11 - 20	12.00	21 - 30	17.00	31 - 40	23.00	41 - 60	28.00	61 - 80	35.00	More than 80 m ³
Category	All Users																							
MINIMUM CHARGE	(NRs)																							
(First 10 m ³ or less)	80.00																							
ADDITIONAL CHARGE																								
Consumption (m ³)	(NRs/m ³)																							
11 - 20	12.00																							
21 - 30	17.00																							
31 - 40	23.00																							
41 - 60	28.00																							
61 - 80	35.00																							
More than 80 m ³	40.00																							
Notes: 1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office. 2. There were 246 new connections in 2014. Price of new domestic connection is NRs15,000 payable prior to connection. 3. The urban poor which comprise 2% of the service area population have no special rates for connection fee or tariff charges.																								
Priority Need of Utility	1. Provide enough water to all consumers.	2. Easy access to water for all.	3. Quality water supply.																					
Consumer Service	Average monthly consumption is about 35.8 m ³ per connection. The water bill averages NRs239.18 per month per connection. Water is available 24 hours a day to most users in both wet and dry months with the use of power generators. Average pressure at the tap is 2 m. Applicants have to wait for about two weeks for new connections to be made. Connection fee is paid all at the start. All 3 water samples taken in 2014 passed the residual chlorine test. There were 216 consumer complaints recorded while 216 leaks were reported repaired during the year. Consumers can complain in person at the water utility office, by telephone or by writing a letter. The service provider has no policy for providing water to the poor.																							
Performance Highlights	NWSUSA provides water at 131 lpcd, the third highest, to its consumers for an average of 24 hours per day to 80.4% of the population in its service area. NRW of 10% is tenth lowest in the top quartile. Production is fully metered with consumption at 98.5% metering. Financial management is good with operating ratio of 0.97 and accounts receivable equivalent of 0.4 month although collection efficiency of 96.4% needs some improvement. Average tariff of NRs6.67/m ³ is sixth lowest which is barely enough to cover operating costs. Staff/1000 connections ratio at 3.6 is good at seventh lowest. While customer service is good with more than sufficient per capita supply and 24 hours per day availability, NWSUSA can still extend services to about 1/5 of the population in its service area with new sources. This may require an increase in tariff which may help reduce the high per capita consumption. The service provider should collect all its bills. It should consider sending its staff to more training programs to increase their productivity. It may have to increase the number of samples for residual chlorine according to the national drinking water quality standards.																							

NAYAGAUN WATER SUPPLYPopulation: 20,106 ¹**Production/Distribution**

Average Daily Production	2,925 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	None
Raw water storage	225 m ³
Service Area ³	10.0 sq km
Distribution pipes	62.0 km

Service Connections

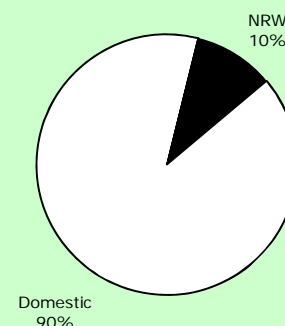
House (9 persons/HC)	2,234
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	2,234

Service Indicators

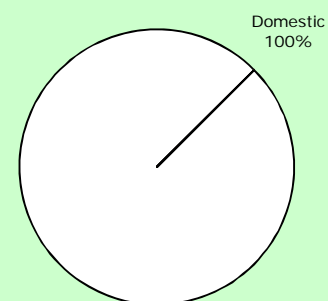
Service Coverage ⁴	80.4%
Water availability/day	24 hours in dry months 24 hours in wet months
Per Capita Consumption ⁵	131 l/c/d
Average Tariff	NRs6.67/m ³

Efficiency Indicators

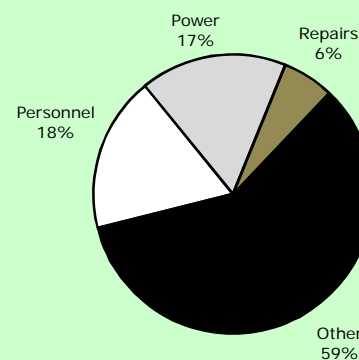
Non-Revenue Water ⁶	10.0%
Unit Production Cost	NRs5.81/m ³
Operating Ratio ⁷	0.97
Accounts Receivable	0.4 month
Staff/1,000 Connections	3.6

Notes:¹ The population is for the present area served by the utility.² All 3 water samples taken in 2014 passed the residual chlorine test.³ The total area of responsibility is 15 sq. km.⁴ The population not served by the water utility draw water from tubewells and other water service providers.⁵ This is based on the total consumption from all connections.⁶ There were 216 leaks repaired in 2014 while 7 meters were replaced and 700 repaired.⁷ The water service provider had no debt service in 2014.⁸ Total use and billings are all from domestic connections.⁹ Other costs include transport, chemical and miscellaneous expenses.**Data as of 2014.**

Annual Water Use⁸
1,067,625 m³



Annual Water Billings⁸
NRs6,411,902



Annual O&M Costs
NRs6,203,654

Water Utility	PARSA SMALL TOWN WATER SUPPLY AND SANITATION CONSUMERS' ASSOCIATION																													
	Address : Ward No.8, Parsa Bazar, Khairahani Municipality, Chitwan District Telephone : +977 056 582 351 Fax : +977 056 583 627 E-mail : pwssca@gmail.com Head : Serman Tamang, Chairman																													
	Parsa Small Town Water Supply and Sanitation Consumers' Association (PSTWSSCA) became fully operational in 2005. It is legally registered with the District Development Committee. PSTWSSCA is responsible for water supply for 15 urban wards of Khairahani MCDC and the VDCs of Chainpur, Kumroj, Bachhauli and Birendranagar which has a total population of 29,154 people. Its present service area has a population density of 1,205 persons/km ² . It draws water from 2 tubewells. It has no master development plan but has a water safety plan in place since 2009. The service provider has an annual report for 2013 that is available to the public as well as an audited financial report for 2014. One personnel attended training in 2014. PSTWSSCA has a partially developed management information system. Only billing operations is computerized.																													
Mission Statement	No mission statement.																													
General Data About Water Utility	Connections : 2,747 Staff : 13 Annual O&M Costs : NRs 4,747,958 Annual Collections : NRs12,901,100 Annual Billings : NRs 9,914,345 Annual Capital Expenditure : NRs 1,889,319 Other Revenues: NRs116,130 Average capital expenditure/connection/year: NRs687.78 Technical, financial and institutional assistance were provided by the government (VDCs, DDC, WSSDO) and financing institutions (ADB, TDF) and UN-Habitat.																													
Tariff Structure	(Used in 2014) <table><tr><th>Category</th><th>Domestic</th><th>Commercial/Industrial/Construction</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>130.00</td><td>150.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td>(NRs/m³)</td><td>(NRs/m³)</td></tr><tr><td>Consumption (m³)</td><td></td><td></td></tr><tr><td>11 - 20</td><td>20.00</td><td>30.00</td></tr><tr><td>21 - 50</td><td>25.00</td><td>40.00</td></tr><tr><td>More than 50</td><td>35.00</td><td>45.00</td></tr><tr><td></td><td></td><td></td></tr></table> <div>Notes:<ol style="list-style-type: none">All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.There were 245 new connections in 2014. Price of new domestic connection is NRs11,460 payable prior to connection.The urban poor which comprise 19% of the service area population can avail of loans from the Micro Finance Fund to pay for connection charges by installment.</div>			Category	Domestic	Commercial/Industrial/Construction	MINIMUM CHARGE	(NRs)	(NRs)	(First 10 m ³ or less)	130.00	150.00	ADDITIONAL CHARGE	(NRs/m ³)	(NRs/m ³)	Consumption (m ³)			11 - 20	20.00	30.00	21 - 50	25.00	40.00	More than 50	35.00	45.00			
Category	Domestic	Commercial/Industrial/Construction																												
MINIMUM CHARGE	(NRs)	(NRs)																												
(First 10 m ³ or less)	130.00	150.00																												
ADDITIONAL CHARGE	(NRs/m ³)	(NRs/m ³)																												
Consumption (m ³)																														
11 - 20	20.00	30.00																												
21 - 50	25.00	40.00																												
More than 50	35.00	45.00																												
Priority Need of Utility	1. Additional overhead tank. 2. Solid waste management program as mandated to the WSSCA. 3. Support to Micro Finance Fund (for funding services for the poor).																													
Consumer Service	Average monthly consumption is about 14.6 m ³ per connection. The water bill averages NRs300.76 per month per connection. Water is available 24 hours a day to most users in both wet and dry months. Average pressure at the tap is 10 meters. Applicants have to wait for only 3 days for new connections to be made. Connection fee is paid all at the start. All of 182 water samples taken during the year passed the residual chlorine test. There were 65 consumer complaints recorded and 34 leaks were repaired during the year. Consumers can complain in person at the water utility office or by telephone. The service provider can arrange payment of connection charges by installment through a loan from the Micro Finance Fund.																													
Performance Highlights	PSTWSSCA provides water at 70 lpcd to 64.8% of the population in its service area for an average of 24 hours per day both in dry and wet months. NRW of 14.4% is near the top quartile with production not metered and consumption fully metered making the NRW value unreliable. Operating ratio is good at 0.48, but accounts receivable equivalent of 2.6 months needs improvement with the highest collection efficiency of 130.1% suggesting efforts in collecting large past arrears. Average tariff of NRs20.57/m ³ is the top quartile allowing the utility to cover its O&M expenses with more than sufficient revenues. Staff/1000 connections ratio is good at 4.7, lower than the median and the average. There is still a need to increase the amount of water available to consumers and expanding coverage. PSTWSSCA needs to collect all its bills in a timely manner. It should continue providing training for its staff to develop their skills and capacity.																													

PARSA WATER SUPPLY

Population: 25,300 ¹

Production/Distribution

Average Daily Production	1,543 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Chlorination
Treated water storage	450 m ³
Service Area ³	21.0 sq km
Distribution pipes	92.0 km

Service Connections

House (7 persons/HC)	2,684
Public (Community) Tap	13
Commercial	0
Industrial	0
Institutional	50
Other	0
Total	2,747

Service Indicators

Service Coverage ⁴	64.8%
Water availability/day	24 hours in dry months 24 hours in wet months
Per Capita Consumption ⁵	70 l/c/d
Average Tariff	NRs20.57/m ³

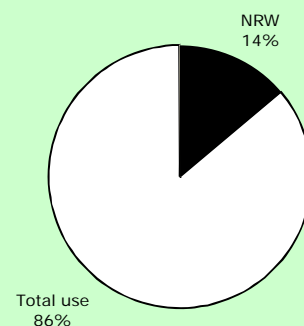
Efficiency Indicators

Non-Revenue Water ⁶	14.4%
Unit Production Cost	NRs8.43/m ³
Operating Ratio ⁷	0.48
Accounts Receivable	2.6 months
Staff/1,000 Connections	4.7

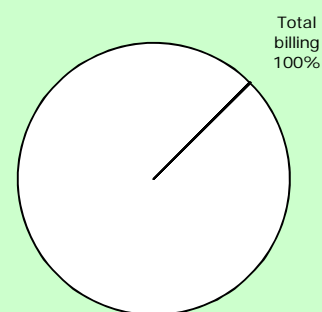
Notes:

- ¹ The population is for the present area served by the utility.
- ² All of 182 water samples taken in 2014 passed the residual chlorine test.
- ³ The area of responsibility was 10 sq km but has since been expanded to 21 sq km.
- ⁴ The population not served by the water utility draw water from tubewells.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 34 leaks repaired in 2014 while 5 meters were either replaced or repaired.
- ⁷ Operating costs do not include debt service of NRs.4,259,430.
- ⁸ Total use and billing include are for domestic, institutional and community tap connections.
- ⁹ Other costs include transport, chemicals and miscellaneous expenses.

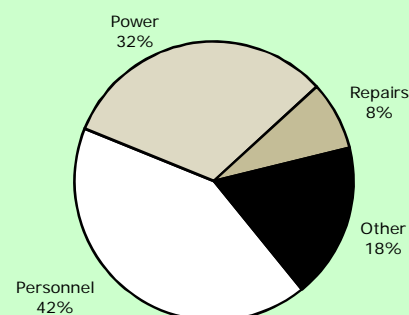
Data as of 2014.



Annual Water Use⁸
563,030 m³



Annual Water Billings⁸
NRs9,914,345



Annual O&M Costs⁹
NRs4,747,958

184 *Nepal Water Service Providers Data Book, 2070 – 2071 (2013-2014)*

PATHARI WATER SUPPLYPopulation: 31,500 ¹**Production/Distribution**

Average Daily Production	807 m ³ /d
Groundwater	68%
Surface Water	32%
Treatment Type ²	Sedimentation, aeration & filter
Total water storage	325 m ³
Service Area ³	12.0 sq km
Distribution pipes	22.0 km

Service Connections

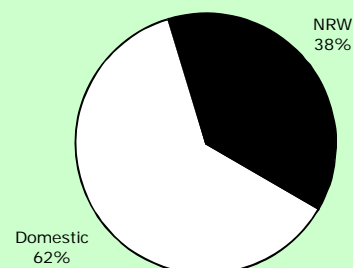
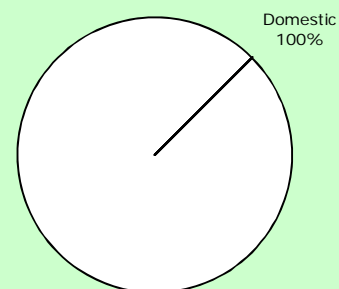
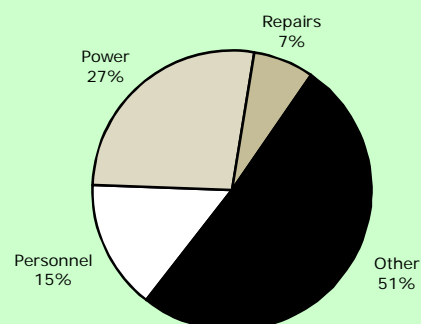
House (9 persons/HC)	1,166
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	1,166

Service Indicators

Service Coverage ⁴	21.3%
Water availability/day	6 hours in dry months 6 hours in wet months
Per Capita Consumption ⁵	48 l/c/d
Average Tariff	NRs14.18/m ³

Efficiency Indicators

Non-Revenue Water ⁶	37.7%
Unit Production Cost	NRs14.71/m ³
Operating Ratio ⁷	1.67
Accounts Receivable	0.6 month
Staff/1,000 Connections	4.3

Notes:¹ The population is for the present area served by the utility.² Both of only 2 water samples taken in 2014 passed the residual chlorine test.³ The total area of responsibility is 16.0 sq km.⁴ The population not served by the water utility draw water from tubewells and dug wells.⁵ This is based on the total consumption which are all domestic.⁶ There were 57 leaks repaired in 2014 while 9 meters were either replaced or repaired.⁷ The water service provider had no debt service in 2014.⁸ Other costs include chemicals and miscellaneous expenses.**Data as of 2014.****Annual Water Use**
294,723 m³**Annual Water Billings**
NRs2,602,562**Annual O&M Costs⁸**
NRs4,334,890

Water Utility	PRAGATINAGAR WATER SUPPLY AND SANITATION USERS COMMITTEE Address : Ward No.10, Pragatinagar, Devchuli Municipality, Nawalparasi District Telephone : +977 078 575004 Fax : none E-mail : none Head : Parasu Ram Regmi, Chairperson <p>Pragatinagar Water Supply and Sanitation Users Committee (PWSSUC) became fully operational in 1998. It is legally registered with the District Water Resource Committee. PWSSUC is responsible for water supply for 6 urban and rural wards of Pragatinagar town which has a total population of 17,100 people. Its present service area has a population density of 254 persons/km². It draws water from 2 stream intakes and one tubewell. It has a master development plan covering 2013 to 2018 and a water safety plan in place since 2011. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. No personnel attended training in 2014. PWSSUC has a well developed management information system. Its billing and accounting systems are computerized.</p>																																						
Mission Statement	No mission statement.																																						
General Data About Water Utility	Connections : 2,856 Staff : 12 Annual O&M Costs : NRs6,307,977 Annual Collections : NRs5,972,202 Annual Billings : NRs5,973,317 Annual Capital Expenditure : Nil Other Revenues: NRs2,216,382 Average capital expenditure/connection/year: Nil <p>Pragatinagar Water Supply and Sanitation Users Committee received no assistance from the government, non government organizations or funding agencies in the past year.</p>																																						
Tariff Structure	(Used in 2014) <table border="1"> <thead> <tr> <th>Category</th><th>House</th><th>Institutional</th><th>Community Taps</th></tr> </thead> <tbody> <tr> <td>MINIMUM CHARGE</td><td>(NRs)</td><td>(NRs)</td><td>(NRs)</td></tr> <tr> <td>(First 10 m³ or less)</td><td>90.00</td><td>90.00</td><td>90.00</td></tr> <tr> <td>ADDITIONAL CHARGE</td><td></td><td></td><td></td></tr> <tr> <td>Consumption (m³)</td><td>(NRs/m³)</td><td>(NRs/m³)</td><td>(NRs/m³)</td></tr> <tr> <td>11 - 25</td><td>12.00</td><td>-</td><td>12.00</td></tr> <tr> <td>26 - 40</td><td>18.00</td><td>-</td><td>12.00</td></tr> <tr> <td>41 - 50</td><td>18.00</td><td>5.00</td><td>12.00</td></tr> <tr> <td>More than 50 m³</td><td>22.00</td><td>5.00</td><td>12.00</td></tr> </tbody> </table> <p>Notes:</p> <ol style="list-style-type: none"> All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office. There were 185 new connections in 2014. Price of new domestic connection ranges from NRs6,540 to NRs15,040 depending on type of road location payable prior to connection. The urban poor which comprise 5% of the service area population are given discounts on connection charges for common taps for groups of 3 – 5 families. 			Category	House	Institutional	Community Taps	MINIMUM CHARGE	(NRs)	(NRs)	(NRs)	(First 10 m ³ or less)	90.00	90.00	90.00	ADDITIONAL CHARGE				Consumption (m ³)	(NRs/m ³)	(NRs/m ³)	(NRs/m ³)	11 - 25	12.00	-	12.00	26 - 40	18.00	-	12.00	41 - 50	18.00	5.00	12.00	More than 50 m ³	22.00	5.00	12.00
Category	House	Institutional	Community Taps																																				
MINIMUM CHARGE	(NRs)	(NRs)	(NRs)																																				
(First 10 m ³ or less)	90.00	90.00	90.00																																				
ADDITIONAL CHARGE																																							
Consumption (m ³)	(NRs/m ³)	(NRs/m ³)	(NRs/m ³)																																				
11 - 25	12.00	-	12.00																																				
26 - 40	18.00	-	12.00																																				
41 - 50	18.00	5.00	12.00																																				
More than 50 m ³	22.00	5.00	12.00																																				
Priority Need of Utility	1. Rehabilitation of old structures. 2. Additional source and pipeline extension. 3. Waste management is a major challenge.																																						
Consumer Service	Average monthly consumption is about 14.7 m ³ per connection. The water bill averages NRs174.29 per month per connection. Water is available for 16 hours a day to most users both in the dry months and wet months. Average pressure at the tap is 12 meters. Applicants have to wait for 15 days for new connections to be made. Connection fee is paid all at the start. Of 210 water samples taken in 2014, 201 passed the residual chlorine test. There were 500 consumer complaints reported and 453 leaks repaired during the year. Consumers can complain by telephone or letter. The service provider provides discounts to connection charges for community taps for groups of urban poor families.																																						
Performance Highlights	PWSSUC provides water at 84 lpcd to its consumers for an average of 16 hours per day throughout the year to 96.5% of the population in its service area. NRW of 33.3% is among those in the bottom quartile with consumption 97.6% metered but none for production rendering the NRW value unreliable. Operating ratio at 1.06 and accounts receivable of 1.2 months both need some improvement although collection efficiency at 100% is good. Average tariff of NRs11.82/m ³ is lower than average and is a bit short of raising revenues to cover O&M costs. Staff/1000 connections ratio at 4.2 is good among those in the top quartile. PWSSUC could extend availability to more than 16 hours per day by installing power generators. It could raise tariff or reduce O&M costs to improve its operating ratio. The service provider should collect its bill payments in time. Production has to be metered to determine its real losses to be able to reduce them. PWSSUC should send its staff to training courses to develop their capacity and increase their productivity.																																						

PRAGATINAGAR WATER SUPPLY

Population: 16,500 ¹

Production/Distribution

Average Daily Production	2,074 m ³ /d
Groundwater	38%
Surface Water	62%
Treatment Type ²	Sedimentation & filtration
Treated water storage	600 m ³
Service Area ³	65.0 sq km
Distribution pipes	127.2 km

Service Connections

House (5.4 persons/HC)	2,788
Public Tap (30 persons/PT)	51
Commercial	0
Industrial	0
Institutional	17
Other	0
Total	2,856

Service Indicators

Service Coverage ⁴	96.5%
Water availability/day	16 hours in dry months 16 hours in wet months
Per Capita Consumption ⁵	84 l/c/d
Average Tariff	NRs11.82/m ³

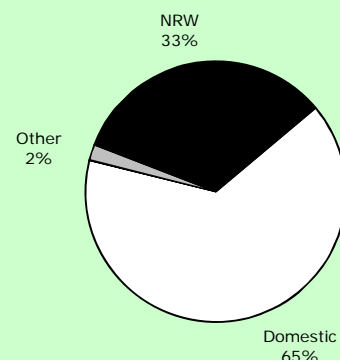
Efficiency Indicators

Non-Revenue Water ⁶	33.3%
Unit Production Cost	NRs8.33/m ³
Operating Ratio ⁷	1.06
Accounts Receivable	1.2 months
Staff/1,000 Connections	4.2

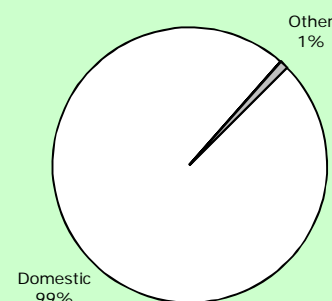
Notes:

- ¹ The population is for the present area served by the utility.
- ² Of 210 water samples taken in 2014, 201 passed the residual chlorine test.
- ³ The total area of responsibility is 75 sq. km..
- ⁴ The population not served by the water utility draw water from tubewells, dug wells, springs, rivers and streams.
- ⁵ This is based on the total consumption from all the connections.
- ⁶ There were 453 leaks repaired in 2014 while 240 meters were either replaced or repaired.
- ⁷ The water service provider had no debt service in 2014.
- ⁸ Other use and billings are for institutional connections.
- ⁹ Other costs include transport, chemicals and miscellaneous expenses.

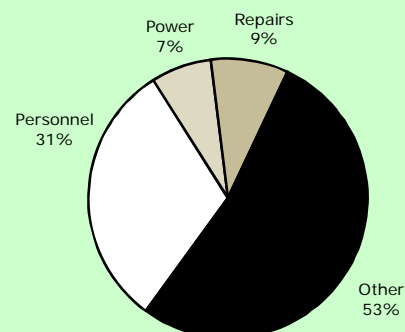
Data as of 2014.



Annual Water Use⁸
756,864 m³



Annual Water Billings⁸
NRs5,973,317



Annual O&M Costs⁹
NRs6,307,977

Water Utility	PRITHVINARAYAN SMALL TOWN DRINKING WATER & SANITATION USERS' COMMITTEE																				
	Address : Ward No.3, Haramtari, Gorkha Municipality, Gorkha District Telephone : +977 064 420 795 Fax : +977 064 421 539 E-mail : pnwuc60@hotmail.com Head : Badri Bahadur Maskey, Chairperson																				
	Prithvinarayan Small Town Drinking Water & Sanitation Users' Committee (PNSTDWSUC) became fully operational in 2008. It is legally registered with the District Water Resources Committee of Gorkha. PNSTDWSUC is responsible for water supply for 4 urban and rural wards of Gorkha Municipality which has a total population of 7,300 people. Its present service area has a population density of 2,367 persons/km ² . It draws water from two stream intakes and one tubewell. It has a master development plan covering 2013 to 2018 but no water safety plan in place. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. No personnel attended training in 2014. PNSTDWSUC has a partially developed management information system. Billing operations is computerized.																				
Mission Statement	Provide safe water round the clock as per WHO standard.																				
General Data About Water Utility	<table><tr><td>Connections</td><td>: 841</td><td></td></tr><tr><td>Staff</td><td>: 9</td><td></td></tr><tr><td>Annual O&M Costs</td><td>: NRs6,655,742</td><td></td></tr><tr><td>Annual Collections</td><td>: NRs5,956,342</td><td>Other Revenues: NRs2,446,615</td></tr><tr><td>Annual Billings</td><td>: NRs6,018,000</td><td></td></tr><tr><td>Annual Capital Expenditure</td><td>: Nil</td><td>Average capital expenditure/connection/year: Nil</td></tr></table> <p>Financial assistance is mostly provided by the government (STDWSSP, TDF, DDC) with contributions from the users' committee, technical assistance from STDWSSP and institutional assistance from DDC and the users' committee.</p>			Connections	: 841		Staff	: 9		Annual O&M Costs	: NRs6,655,742		Annual Collections	: NRs5,956,342	Other Revenues: NRs2,446,615	Annual Billings	: NRs6,018,000		Annual Capital Expenditure	: Nil	Average capital expenditure/connection/year: Nil
Connections	: 841																				
Staff	: 9																				
Annual O&M Costs	: NRs6,655,742																				
Annual Collections	: NRs5,956,342	Other Revenues: NRs2,446,615																			
Annual Billings	: NRs6,018,000																				
Annual Capital Expenditure	: Nil	Average capital expenditure/connection/year: Nil																			
Tariff Structure	<p>(Used since February 2014)</p> <table><tr><th>Category</th><th></th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 6 m³ or less)</td><td>300.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>7 - 10</td><td>45.00</td></tr><tr><td>11 - 20</td><td>60.00</td></tr><tr><td>21 - 30</td><td>80.00</td></tr><tr><td>More than 30 m³</td><td>100.00</td></tr></table> <p>Notes:</p> <ol style="list-style-type: none">1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.2. There were 54 new connections in 2014. Price of new domestic connection is NRs43,000 payable prior to connection.3. The urban poor who comprise 10% of the service area population are provided with a 7% subsidy on connection charges on the recommendation of the municipal government.			Category		MINIMUM CHARGE	(NRs)	(First 6 m ³ or less)	300.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	7 - 10	45.00	11 - 20	60.00	21 - 30	80.00	More than 30 m ³	100.00
Category																					
MINIMUM CHARGE	(NRs)																				
(First 6 m ³ or less)	300.00																				
ADDITIONAL CHARGE																					
Consumption (m ³)	(NRs/m ³)																				
7 - 10	45.00																				
11 - 20	60.00																				
21 - 30	80.00																				
More than 30 m ³	100.00																				
Priority Need of Utility	<table><tr><td>1. Subsidy for electrical charges in the water tariff.</td><td>2. Electrical feeder line for each pump house.</td><td>3. Transfer of electrical transmission line to electrical authority.</td></tr></table>			1. Subsidy for electrical charges in the water tariff.	2. Electrical feeder line for each pump house.	3. Transfer of electrical transmission line to electrical authority.															
1. Subsidy for electrical charges in the water tariff.	2. Electrical feeder line for each pump house.	3. Transfer of electrical transmission line to electrical authority.																			
Consumer Service	Average monthly consumption is about 12.6 m ³ per connection. The water bill averages NRs596.31 per month per connection. Water is available 5 hours a day to most users in the dry months and 8 hours a day during the wet months. Average pressure at the tap is 7 meters. Applicants have to wait for 7 days for new connections to be made. Connection fee is paid all at the start. No water samples were taken for residual chlorine test in 2014. There were 100 consumer complaints recorded while 60 leaks were repaired during the year. Consumers can complain in person at the water utility office, by telephone or letter. The service provider allows 7% subsidy on connections charges for the urban poor.																				
Performance Highlights	PNSTDWSUC provides water at only 56 lpcd to its consumers for an average of 5 hours per day in the dry months and 8 hours per day during the wet months to 84.9% of the population in its service area. NRW of 32.4% is among the highest in the bottom quartile with production not metered although consumption is 100% metered making the NRW an estimate at best. Financial management needs to be improved with operating ratio at 1.11, accounts receivable equivalent of 1.2 months and collection efficiency of 99.0%. Average tariff of NRs47.47/m ³ is the highest yet it is not enough to raise revenues to cover operating expenses. Staff/1000 connections ratio at 10.7 is the eighth highest. There is a need to reduce NRW but production has to be metered first to determine the actual value better. More water can be provided to consumers and more people can be served with the development of additional sources complemented by NRW reduction. The service provider needs to increase tariffs to cover its O&M costs and to collect bill payments in time. It should send more staff to training courses to develop their skills and capability. PNSTDWSUC should monitor residual chlorine according to national drinking water quality standards.																				

PRITHVINARAYAN WATER SUPPLY

Population: 7,100 ¹

Production/Distribution

Average Daily Production	514 m ³ /d
Groundwater	17%
Surface Water	83%
Treatment Type ²	Chlorination
Treated water storage	550 m ³
Service Area ³	3.0 sq km
Distribution pipes	20.0 km

Service Connections

House (7.5 persons/HC)	816
Public Tap	0
Commercial	0
Industrial	0
Institutional	25
Other	0
Total	841

Service Indicators

Service Coverage ⁴	84.9%
Water availability/day	5 hours in dry months 8 hours in wet months
Per Capita Consumption ⁵	56 l/c/d
Average Tariff	NRs47.47/m ³

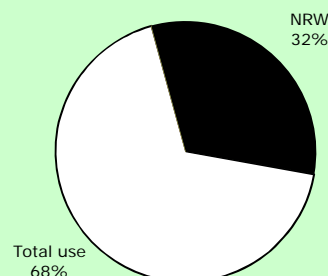
Efficiency Indicators

Non-Revenue Water ⁶	32.4%
Unit Production Cost	NRs35.48/m ³
Operating Ratio ⁷	1.11
Accounts Receivable	1.2 months
Staff/1,000 Connections	10.7

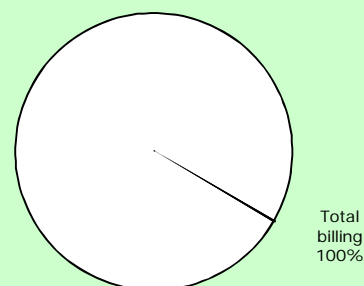
Notes:

- ¹ The population is for the present area served by the utility.
- ² No residual chlorine test was made in 2014.
- ³ Total area of responsibility is the same at 3.0 sq. km.
- ⁴ The population not served by the water utility draw water from dug wells, traditional spouts, springs, rivers and streams.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 60 leaks repaired in 2014 while no meter was either replaced or repaired.
- ⁷ Operating cost does not include debt service of NRs.1,069,166.
- ⁸ Total use and billing include those from domestic and institutional connections.
- ⁹ Other costs include transport and miscellaneous expenses.

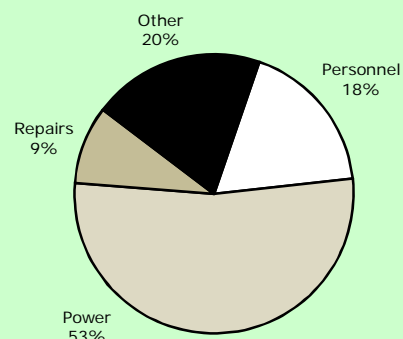
Data as of 2014.



Annual Water Use⁸
187,590 m³



Annual Water Billings⁸
NRs6,018,000



Annual O&M Costs⁹
NRs6,655,742

Water Utility	RATNANAGAR WATER SUPPLY AND SANITATION USERS ASSOCIATION																						
	Address : Ward No.2, Nabin Tole, Ratnanagar Municipality, Chitwan District Telephone : +977 056 561527 Fax : +977 056 562715 E-mail : ratnanagarkhanepani@gmail.com Head : Yadav Prasad Pathak, Chairman																						
	Ratnanagar Water Supply and Sanitation Users Association (RWSUA) became fully operational in 2007. It is legally registered with the District Water Resource Committee. RWSUA is responsible for water supply for 16 urban and rural wards of Ratnanagar, Jutpani and Pithuwa VDCs which has a total population of 52,000 people. Its present service area has a population density of 1,867 persons/km ² . It draws water from 4 tubewells which are all operational. It has no master development plan or a water safety plan in place. The service provider has an annual report for 2013 that is available to the public as well as an audited financial report for the same year. One personnel attended training 2014. RWSUA has a partly developed management information system. Its billing and accounting operations are computerized.																						
Mission Statement	No mission statement.																						
General Data About Water Utility	Connections : 4,503 Staff : 11 Annual O&M Costs : NRs 7,391,127 Annual Collections : NRs14,170,867 Annual Billings : NRs14,959,975 Annual Capital Expenditure : NRs 1,939,883 Other Revenues: NRs4,267,233 Average capital expenditure/connection/year: NRs430.80 Ratnanagar Water Supply and Sanitation Users Association did not receive assistance from the government nor from any non government organization in the past year,																						
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>All Users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>110.00</td></tr><tr><td>COMMODITY CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>11 - 20</td><td>14.00</td></tr><tr><td>21 - 30</td><td>17.00</td></tr><tr><td>31 - 40</td><td>20.00</td></tr><tr><td>41 - 50</td><td>23.00</td></tr><tr><td>More than 50 m³</td><td>26.00</td></tr></table> <p>Notes:</p> <p>1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.</p> <p>2. There were 395 new connections in 2014. Price of new domestic connection is NRs8,250 payable prior to connection.</p> <p>3. The urban poor which comprise 10% of the service area population are provided community tap connections at 40% discount rate.</p>			Category	All Users	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	110.00	COMMODITY CHARGE		Consumption (m ³)	(NRs/m ³)	11 - 20	14.00	21 - 30	17.00	31 - 40	20.00	41 - 50	23.00	More than 50 m ³	26.00
Category	All Users																						
MINIMUM CHARGE	(NRs)																						
(First 10 m ³ or less)	110.00																						
COMMODITY CHARGE																							
Consumption (m ³)	(NRs/m ³)																						
11 - 20	14.00																						
21 - 30	17.00																						
31 - 40	20.00																						
41 - 50	23.00																						
More than 50 m ³	26.00																						
Priority Need of Utility	1. Construction of office building and expansion of system. 2. Capacity building. 3. Water testing laboratory.																						
Consumer Service	Average monthly consumption is about 16.4 m ³ per connection. The water bill averages NRs276.85 per month per connection. Water is available 10 hours a day to most users in both wet and dry months. Average pressure at the tap is 5 meters. Applicants have to wait for 7 days for new connections to be made. Connection fee is paid all at the start. Of 50 water samples taken during the year 45 passed the residual chlorine test. There were 400 consumer complaints recorded while 400 leaks were repaired during the year. Consumers can complain in person at the water utility office, by telephone or by writing a letter. The service provider provides water to the poor through connection to community taps at 40% discount rate.																						
Performance Highlights	RWSUA provides water at 94 lpcd to its consumers for an average of 10 hours per day throughout the year to 50% of the population in its service area. NRW of 11.9% is at the top quartile with production not metered although consumption is 99.4% metered making the NRW value an estimate at best. Financial management is good with operating ratio of 0.49 and accounts receivable equivalent of 0.8 month although collection efficiency is 94.7% needing some improvement. Average tariff of NRs16.84/m ³ is near the top quartile and is more than enough to cover O&M costs. Staff/1000 connections ratio at 2.4 is the second lowest among the utilities. While it is providing sufficient water per capita coverage must be increased as one of the service provider's priorities. It should also extend availability to more than 10 hours per day. More efforts should be made in collecting all bill payments. RWSUA needs to fully meter all its consumers and production to have a more accurate determination of water losses. It should also provide training for more staff to develop their skills and capability.																						

RATNANAGAR WATER SUPPLY

Population: 28,000 ¹

Production/Distribution

Average Daily Production	2,762 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Roughing filter
Raw water storage	900 m ³
Service Area ³	15.0 sq km
Distribution pipes	150.0 km

Service Connections

House (6 persons/HC)	4,458
Public Tap (12 persons/PT)	20
Commercial	0
Industrial	0
Institutional	25
Other (community taps)	0
Total	4,503

Service Indicators

Service Coverage ⁴	50.0%
Water availability/day	10 hours in dry months 10 hours in wet months
Per Capita Consumption ⁵	94 l/c/d
Average Tariff	NRs16.84/m ³

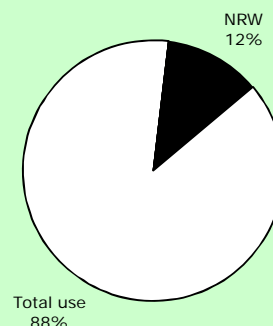
Efficiency Indicators

Non-Revenue Water ⁶	11.9%
Unit Production Cost	NRs7.33/m ³
Operating Ratio ⁷	0.49
Accounts Receivable	0.8 month
Staff/1,000 Connections	2.4

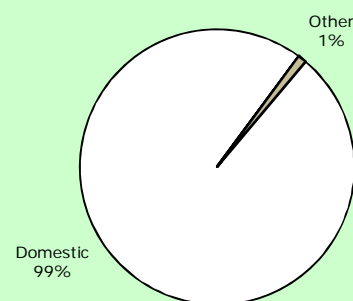
Notes:

- ¹ The population is for the present area served by the utility.
- ² Of 50 water samples taken in 2014, 45 passed the residual chlorine test.
- ³ The total area of responsibility is 30.0 sq km.
- ⁴ The population not served by the water utility draw water from tubewells and dug wells.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 400 leaks repaired in 2014 while 180 meters were either replaced or repaired.
- ⁷ The O&M cost does not include debt service of NRs5,299,900.
- ⁸ Total use includes those from domestic and institutional connections.
- ⁹ Other billing is for institutional connections.
- ¹⁰ Other costs include transport, chemicals and miscellaneous expenses.

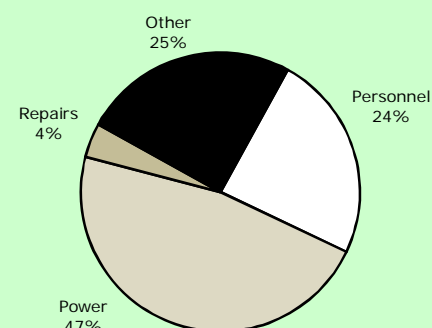
Data as of 2014.



Annual Water Use⁸
1,008,000 m³



Annual Water Billings⁹
NRs14,959,975



Annual O&M Costs¹⁰
NRs7,391,127

Water Utility	SALAKPUR WATER SUPPLY AND SANITATION USERS COMMITTEE																				
	Address : Ward No.9, Pani Tanki Tole, Salakpur, Koshi Haraicha Municipality, Morang District Telephone : +977 984 2136451 Fax : none E-mail : none Head : Govinda Bahadur Basnet, Chairperson																				
	Salakpur Water Supply and Sanitation Users Committee (SWSSUC) became fully operational in 2002. It is legally registered with the District Water Resource Committee. SWSSUC is responsible for water supply for 5 urban and rural wards of Haraicha, Mrigauliya and Indrapur VDCs which have a total population of 25,000 people. Its present service area has a population density of 371.4 persons/km ² . It draws water from 2 tubewells which are both operational. It has a master development plan covering 2012 to 2027 and a water safety plan in place since 2014. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. One personnel attended training provided by MoUD/SEIU in 2014. SWSSUC has no management information system. None of its operations is computerized.																				
Mission Statement	No mission statement.																				
General Data About Water Utility	Connections : 1,600 Staff : 8 Annual O&M Costs : NRs3,452,505 Annual Collections : NRs3,117,727 Annual Billings : NRs3,117,727 Annual Capital Expenditure : Nil Other Revenues: NRs1,383,668 Average capital expenditure/connection/year: Nil Salakpur Water Supply and Sanitation Users Committee has not received any form of assistance from the government, NGOs or funding agencies in recent years.																				
Tariff Structure	<p>(Used in 2014)</p> <table><thead><tr><th>Category</th><th>All Users</th></tr></thead><tbody><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 11 m³ or less)</td><td>100.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>12 - 27</td><td>17.00</td></tr><tr><td>More than 27 m³</td><td>23.00</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></tbody></table> <p>Notes:</p> <ol style="list-style-type: none">All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.There were 118 new connections in 2014. Price of new domestic connection is NRs9,000 payable prior to connection.The urban poor which comprise 5% of the service area population are not given any special tariff rates or connection charges but will be provided with community taps starting 2014.			Category	All Users	MINIMUM CHARGE	(NRs)	(First 11 m ³ or less)	100.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	12 - 27	17.00	More than 27 m ³	23.00				
Category	All Users																				
MINIMUM CHARGE	(NRs)																				
(First 11 m ³ or less)	100.00																				
ADDITIONAL CHARGE																					
Consumption (m ³)	(NRs/m ³)																				
12 - 27	17.00																				
More than 27 m ³	23.00																				
Priority Need of Utility	1. Two additional deep borings. 2. Additional 450 cu m overhead tank. 3. Pipeline extension.																				
Consumer Service	Average monthly consumption is about 10.7 m ³ per connection. The water bill averages NRs162.38 per month per connection. Water is available 13.5 hours a day to most users during both the wet months and the dry months. Average pressure at the tap is 7 meters. Applicants have to wait for 10 days for new connections to be made. Connection fee is paid all at the start. No water samples were taken during the year for residual chlorine test. There were 105 consumer complaints recorded while 105 leaks were repaired during the year. Consumers can complain to the service provider by telephone. The service provider has no special policy for providing water supply to the urban poor but is providing community taps.																				
Performance Highlights	SWSSUC provides water at only 43 lpcd to its consumers for an average of 13.5 hours per day throughout the year to 52% of the population in its service area. NRW of 9% is good at seventh lowest with both production and consumption fully metered. Financial management is good with no accounts receivable and collection efficiency of 100% although operating ratio at 1.11 needs improvement. Average tariff of NRs15.23/m ³ is about average but is not enough to cover operating expenses. Staff/1000 connections ratio at 5.0 is good enough and better than average. Consumers need to have more water per capita and longer water availability. The service provider may have to develop new sources for this and also install power generators to extend services to more than 13.5 hours per day. There is room for tariff increase to cover O&M costs. SWSSUC should send more staff to training courses to develop their capacity and increase their productivity. It should monitor residual chlorine according to the national drinking water quality standards to check on the effectiveness of chlorination treatment.																				

SALAKPUR WATER SUPPLYPopulation: 13,000 ¹**Production/Distribution**

Average Daily Production	616 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	None
Raw water storage	225 m ³
Service Area ³	35.0 sq km
Distribution pipes	35.0 km

Service Connections

House (8.12 persons/HC)	1,600
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	1,600

Service Indicators

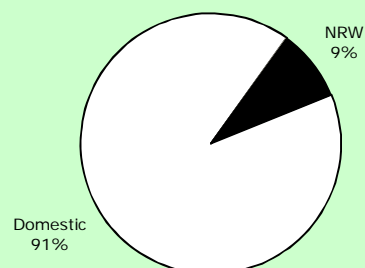
Service Coverage ⁴	52.0%
Water availability/day	13.5 hours in dry months
	13.5 hours in dry months
Per Capita Consumption ⁵	43 l/c/d
Average Tariff	NRs15.23/m ³

Efficiency Indicators

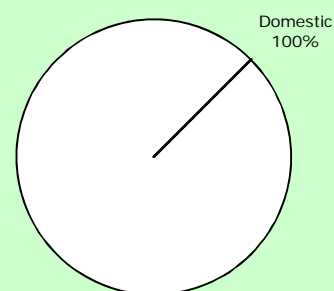
Non-Revenue Water ⁶	9.0%
Unit Production Cost	NRs15.34/m ³
Operating Ratio ⁷	1.11
Accounts Receivable	Nil
Staff/1,000 Connections	5.0

Notes:

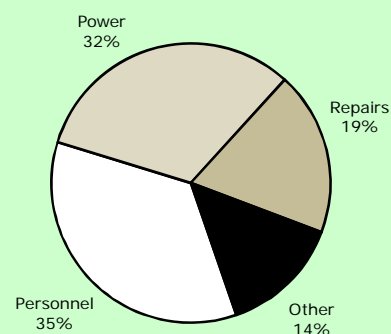
- ¹ The population is for the present area served by the utility.
- ² No water samples were taken in 2014 for residual chlorine test.
- ³ The original area of responsibility was 18.0 sq. km. which was expanded to its present area.
- ⁴ The population not served by the water utility draw water from dug wells and tubewells.
- ⁵ This is based on the total consumption which are all domestic.
- ⁶ There were 105 leaks repaired in 2014 while 16 meters were either replaced or repaired.
- ⁷ The water service provider had no debt service in 2014.
- ⁸ All use and billings are for house connections.
- ⁹ Other costs include transport and miscellaneous expenses.

Data as of 2014.

Annual Water Use⁸
225,000 m³



Annual Water Billings⁸
NRs3,117,727



Annual O&M Costs
NRs3,452,505

Water Utility	SHANISCHARE - ARJUNDHARA WATER SUPPLY AND SANITATION USERS COMMITTEE																
	Address : Ward No.1, Cinema Hall Tole, Shani Arjun Municipality, Jhapa District Telephone : +977 023 465642 Fax : none E-mail : none Head : Chhatramani Dhakal, Chairperson																
	Shanisichare-Arjundhara Water Supply and Sanitation Users Committee (SAWSSUC) became fully operational in 1994. It is legally registered with the District Water Resource Committee. SAWSSUC is responsible for water supply for 12 rural wards of Shanisichare and Arjundhara VDCs which has a total population of 15,000 people. Its present service area has a population density of 310 persons/km ² . It draws water from 3 tubewells of which 2 are operational. It has no master development plan but had a water safety plan prepared in 2008. The service provider has an annual report for 2013 that is available to the public as well as an audited financial report for the same year. No personnel attended training in 2014. SAWSSUC has no management information system and none of its operations is computerized.																
Mission Statement	No mission statement.																
General Data About Water Utility	Connections : 1,190 Staff : 7 Annual O&M Costs : NRs2,910,548 Annual Collections : NRs2,699,363 Annual Billings : NRs3,039,905 Annual Capital Expenditure : Nil Other Revenues: NRs444,841 Average capital expenditure/connection/year: Nil Shanisichare-Arjundhara Water Supply and Sanitation Users Committee received full assistance from the DDC for pipe procurement and financial assistance from WSSDO for boundary wall construction.																
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>All Users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 8 m³ or less)</td><td>100.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>More than 8 m³</td><td>12.50</td></tr><tr><td colspan="2">Community taps users have a minimum charge limit of NRs100.00 for the first 9 m³</td></tr></table> <p>Notes:</p> <p>1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.</p> <p>2. There were 29 new connections in 2014. Price of new domestic connection is NRs8,100 payable prior to connection.</p> <p>3. The urban poor which comprise 30% of the service area population are not provided with any special rate consideration for tariff nor connection fees.</p>			Category	All Users	MINIMUM CHARGE	(NRs)	(First 8 m ³ or less)	100.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	More than 8 m ³	12.50	Community taps users have a minimum charge limit of NRs100.00 for the first 9 m ³	
Category	All Users																
MINIMUM CHARGE	(NRs)																
(First 8 m ³ or less)	100.00																
ADDITIONAL CHARGE																	
Consumption (m ³)	(NRs/m ³)																
More than 8 m ³	12.50																
Community taps users have a minimum charge limit of NRs100.00 for the first 9 m ³																	
Priority Need of Utility	1. Additional overhead tank and deep well. 2. Extension of pipeline. 3. Filtration system and power generator.																
Consumer Service	Average monthly consumption is about 14.4 m ³ per connection. The water bill averages NRs212.88 per month per connection. Water is available 24 hours a day to most users in the wet months and dry months with backup power generators. Average pressure at the tap is 6 meters. Applicants have to wait for 3 days for new connections to be made. Connection fee is paid all at the start. No water samples were taken during the year for residual chlorine test. There were 230 consumer complaints recorded and the same number of leaks were repaired during the year. Consumers can complain in person at the water utility office, by telephone or by writing a letter. The service provider has no policy for providing service to the urban poor.																
Performance Highlights	SAWSSUC provides water at 63 lpcd to its consumers for an average of 24 hours per day throughout the year to 60% of the population in its service area. NRW of 32% is in the bottom quartile with production and consumption fully metered. Financial management is fine with operating ratio of 0.96 but needs improvement in its accounts receivable equivalent of 1.3 months and 88.8% collection efficiency. Average tariff of NRs14.80/m ³ is just above the median and barely enough for revenues to cover O&M expenses. Staff/1000 connections ratio at 5.9 is lower than the average but higher than the median. Priority should be the reduction of NRW as this can augment additional supply to increase coverage and expand services. This will require increase in tariff to cover capital costs and improve operating ratio. SAWSSUC needs to collect all bill payments on time. It needs to provide training for its staff to develop their capacity and increase productivity. Residual chlorine should also be monitored according to the national drinking water quality standards to check on the effectiveness of chlorination treatment.																

SHANISCHARE WATER SUPPLY

Population: 9,000 ¹

Production/Distribution

Average Daily Production	827 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Pressure filter
Treated water storage	225 m ³
Service Area ³	29.0 sq km
Distribution pipes	29.0 km

Service Connections

House (9 persons/HC)	1,159
Public Tap (45 persons/PT)	31
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	1,190

Service Indicators

Service Coverage ⁴	60.0%
Water availability/day	24 hours in dry months
	24 hours in wet months
Per Capita Consumption ⁵	63 l/c/d
Average Tariff	NRs14.80/m ³

Efficiency Indicators

Non-Revenue Water ⁶	32.0%
Unit Production Cost	NRs9.64/m ³
Operating Ratio ⁷	0.96
Accounts Receivable	1.3 months
Staff/1,000 Connections	5.9

Notes:

¹ The population is for the present area served by the utility.

² No water samples were taken in 2014 for residual chlorine test.

³ The total area of responsibility is 80.0 sq km.

⁴ The population not served by the water utility draw water from other service providers, tubewells, dug wells, springs, rivers and streams.

⁵ This is based on the total consumption which are all domestic.

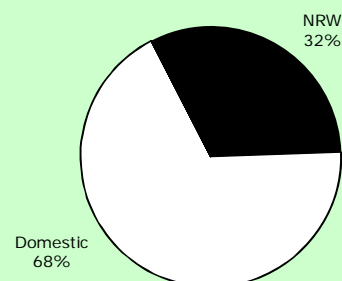
⁶ There were 230 leaks repaired in 2014 while 78 meters were either replaced or repaired.

⁷ The water service provider had no debt service in 2014.

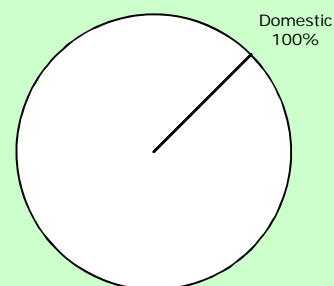
⁸ All use and billings are for house connections and public taps classified as domestic.

⁹ Other costs include chemical and miscellaneous expenses.

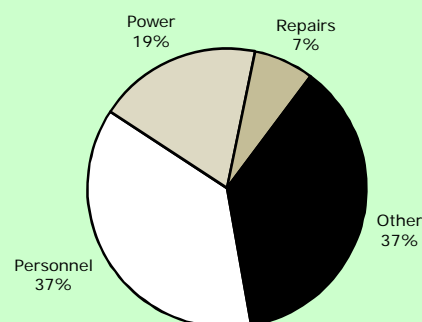
Data as of 2014.



Annual Water Use⁸
301,863 m³



Annual Water Billings⁸
NRs3,039,905



Annual O&M Costs⁹
NRs2,910,548

Water Utility	SHANKARNAGAR WATER USERS AND SANITATION ASSOCIATION																				
	Address : Ward No.2, Jogikuti, Tilottama Municipality, Rupandehi District Telephone : +977 071 437 986 Fax : none E-mail : shnt_karki@yahoo.com Head : Hari Prasad Tiwari, Chairman																				
	Shankarnagar Water Users and Sanitation Association (SWUSA) became fully operational in 1999. It is legally registered with the District Water Resource Committee. SWUSA is responsible for water supply for 5 urban and rural wards of the new Tilottama Municipality and has a total population of 45,000 people. Its present service area has a population density of 2,994 persons/km ² . It has 13 wells of which only 4 are currently operational with the rest reserved for expansion of its service area. It has a master development plan covering 2013 to 2016 and a water safety plan that has been in place since 2010. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. None of its personnel has undergone training in 2014. SWUSA has a partly developed management information system. Billing and accounting operations are computerized.																				
Mission Statement	No mission statement.																				
General Data About Water Utility	Connections : 3,955 Staff : 14 Annual O&M Costs : NRs 8,568,417 Annual Collections : NRs14,155,122 Annual Billings : NRs14,245,150 Annual Capital Expenditure : Nil Other Revenues: NRs9,297,777 Average capital expenditure/connection/year: Nil Shankarnagar Water Users and Sanitation Association has not received any assistance from the government and non government organizations in the past year.																				
Tariff Structure	(Used in 2014) <table><tr><th>Category</th><th>All Users ½" connection</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 8 m³ or less)</td><td>88.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>9 - 30 m³</td><td>13.00</td></tr><tr><td>31 - 50 m³</td><td>15.00</td></tr><tr><td>51 - 100 m³</td><td>17.00</td></tr><tr><td>More than 100 m³</td><td>18.00</td></tr></table> Notes: 1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office. 2. There were 341 new connections in 2014. Price of new domestic connection is NRs15,000 payable prior to connection. 3. The water service provider claims that there are no urban poor in its service area.			Category	All Users ½" connection	MINIMUM CHARGE	(NRs)	(First 8 m ³ or less)	88.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	9 - 30 m ³	13.00	31 - 50 m ³	15.00	51 - 100 m ³	17.00	More than 100 m ³	18.00
Category	All Users ½" connection																				
MINIMUM CHARGE	(NRs)																				
(First 8 m ³ or less)	88.00																				
ADDITIONAL CHARGE																					
Consumption (m ³)	(NRs/m ³)																				
9 - 30 m ³	13.00																				
31 - 50 m ³	15.00																				
51 - 100 m ³	17.00																				
More than 100 m ³	18.00																				
Priority Need of Utility	1. Water supply according to demand. 2. Cheaper water rates. 3. Water quality according to government standards.																				
Consumer Service	Average monthly consumption is about 27.7 m ³ per connection. The water bill averages NRs300.15 per month per connection. Water is available 24 hours a day to most users in both wet and dry months. Average pressure at the tap is 7 meters. Applicants have to wait for about 1 – 3 days for new connections to be made. Connection fee is paid all at the start. All 12 water samples taken in 2014 passed the residual chlorine test. There were 835 consumer complaints recorded while 835 leaks were repaired during the year. Consumers can complain in person at the water utility office, by telephone or by writing a letter. The service provider has no special policy for providing water to the poor as there are no urban poor in the service area.																				
Performance Highlights	SWUSA provides water at 101 lpcd to its consumers for an average of 24 hours per day throughout the year to 79.1% of the population in its service area. NRW of 19.5% is lower than the median among the utilities with both production and consumption fully metered. Financial management is good with operating ratio at 0.60, accounts receivable equivalent of 0.1 month and collection efficiency of 99.4%. Average tariff of NRs10.84/m ³ is just above the bottom quartile but more than enough to cover operating expenses. Staff/1000 connections ratio is good at 3.5, the fifth lowest. The service provider is doing well needing only some improvements in serving more customers which may require developing new sources as current production may not be sufficient to increased demand. SWUSA should send staff to training courses to further develop their capacity and increase productivity. Residual chlorine needs to be monitored according to the national drinking water quality standards to check on the effectiveness of chlorination treatment.																				

SHANKARNAGAR WATER SUPPLYPopulation: 45,000 ¹**Production/Distribution**

Average Daily Production	4,472 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Chlorination
Raw water storage	450 m ³
Service Area ³	15.0 sq km
Distribution pipes	106.0 km

Service Connections

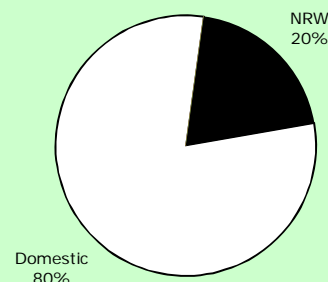
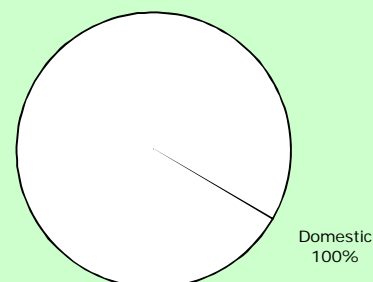
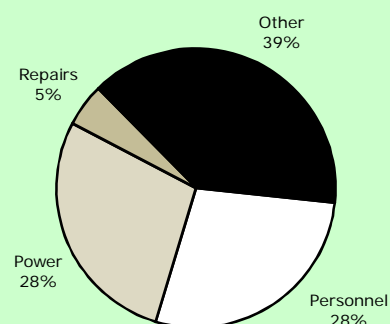
House (9 persons/HC)	3,955
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	3,955

Service Indicators

Service Coverage ⁴	79.1%
Water availability/day	24 hours in dry months 24 hours in wet months
Per Capita Consumption ⁵	101 l/c/d
Average Tariff	NRs10.84/m ³

Efficiency Indicators

Non-Revenue Water ⁶	19.5%
Unit Production Cost	NRs5.25/m ³
Operating Ratio ⁷	0.60
Accounts Receivable	0.1 month
Staff/1,000 Connections	3.5

Notes:¹ The population is for the present area served by the utility.² All 12 water samples taken in 2014 passed the residual chlorine test.³ This is also the area of responsibility.⁴ Total population is served by house connections.⁵ This is based on the total consumption which is all domestic.⁶ There were 835 leaks repaired in 2014 while 443 meters were replaced and 70 repaired.⁷ The water service provider had no debt service in 2014.⁸ Only domestic users are being served through house connections.⁹ Other costs include miscellaneous expenses.**Data as of 2014.****Annual Water Use⁸**
1,632,360 m³**Annual Water Billings⁸**
NRs14,245,150**Annual O&M Costs⁹**
NRs8,568,417

Water Utility	SHIVALAYA WATER SUPPLY USER AND SANITATION ORGANIZATION																						
	Address : Ward No.8, Radhakrishna Tole, Kushma Municipality, Parbat District Telephone : +977 067 420424 Fax : +977 067 420465 E-mail : kushma_khanepani@yahoo.com Head : Taranath Sharma, Chairman																						
	Shivalaya Water Supply User and Sanitation Organization (SWUSO) became fully operational in 2000. It is legally registered with the District Water Resource Committee. SWUSO is responsible for water supply for 9 urban wards of Shivalaya (Kushma) which has a total population of 14,194 people. Its present service area has a population density of 1,725 persons/km ² . It draws water from 2 intakes from the Pati and Kyadi Rivers. It has no master development plan but has a water safety plan in place since 2012. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for 2013. Three personnel attended training provided by the government in 2014. SWUSO has a well developed management information system. Its billing, accounting, water treatment and records systems are computerized.																						
Mission Statement	Quality in drinking water: access to every hosehold.																						
General Data About Water Utility	Connections : 1,904 Staff : 16 Annual O&M Costs : NRs4,866,367 Annual Collections : NRs8,326,323 Annual Billings : NRs8,034,380 Annual Capital Expenditure : NRs1,822,065 Other Revenues: NRs3,756,297 Average capital expenditure/connection/year: NRs956.97.19 Shivalaya Water Supply User and Sanitation Organization did not receive any assistance from the government, non government organizations or funding agencies in the past year																						
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>All Users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>120.00</td></tr><tr><td>COMMODITY CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>11 - 20</td><td>18.00</td></tr><tr><td>21 - 30</td><td>20.00</td></tr><tr><td>31 - 40</td><td>22.00</td></tr><tr><td>41 - 50</td><td>25.00</td></tr><tr><td>More than 50 m³</td><td>30.00</td></tr></table> <p>Notes:</p> <ol style="list-style-type: none">All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.There were 102 new connections in 2014. Price of new domestic connection is NRs29,500 payable prior to connection.The urban poor which comprise 4% of the service area population are provided with community taps as well as 30% discount for private connections with installment payment.			Category	All Users	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	120.00	COMMODITY CHARGE		Consumption (m ³)	(NRs/m ³)	11 - 20	18.00	21 - 30	20.00	31 - 40	22.00	41 - 50	25.00	More than 50 m ³	30.00
Category	All Users																						
MINIMUM CHARGE	(NRs)																						
(First 10 m ³ or less)	120.00																						
COMMODITY CHARGE																							
Consumption (m ³)	(NRs/m ³)																						
11 - 20	18.00																						
21 - 30	20.00																						
31 - 40	22.00																						
41 - 50	25.00																						
More than 50 m ³	30.00																						
Priority Need of Utility	1. Capacity building through training, workshops and field visits. 2. Increased storage capacities. 3. Roughing filter for water quality improvement.																						
Consumer Service	Average monthly consumption is about 20.4 m ³ per connection. The water bill averages NRs351.64 per month per connection. Water is available 8 hours a day to most users in the dry months and 9 hours a day in the wet months. Average pressure at the tap is 9 meters. Applicants have to wait for 10 days for new connections to be made. Connection fee is paid all at the start. Four out of 5 water samples taken during the year passed the residual chlorine test. There were 204 consumer complaints recorded while 35 leaks were repaired during the year. Consumers can complain in person at the water utility office or by telephone. The service provider provides water to the urban poor through community taps and discounted rates.																						
Performance Highlights	SWUSO provides water at 93 lpcd to its consumers for an average of 8 hours per day during the dry months and 9 hours per day in the wet months to 97.2% of the population in its service area. NRW of 34.7% is the eighth highest with consumption fully metered but only 42% of production is metered making the NRW value an estimate at best. Financial management is good with operating ratio at 0.61, accounts receivable of 1.0 month and collection efficiency of 103.6% suggesting some efforts at collecting past arrears. Average tariff of NRs17.23/m ³ is in the top quartile and is sufficient enough to raise revenues that covers O&M expenses well. Staff/1000 connections ratio at 8.4 is higher than the average. NRW needs to be lowered but production needs to be fully metered first to determine the real NRW value. SWUSO is serving its consumers well except for water availability which can be improved with the use of power generators. It should continue sending more staff to training courses to develop their capacity and increase their productivity. More residual chlorine tests may be needed to conform to the national drinking water quality standards.																						

SHIVALAYA WATER SUPPLYPopulation: 13,802 ¹**Production/Distribution**

Average Daily Production	1,956 m ³ /d
Groundwater	Nil
Surface Water	100%
Treatment Type ²	Sedimentation & slow sand filter
Treated water storage	415 m ³
Service Area ³	8.0 sq km
Distribution pipes	29.5 km

Service Connections

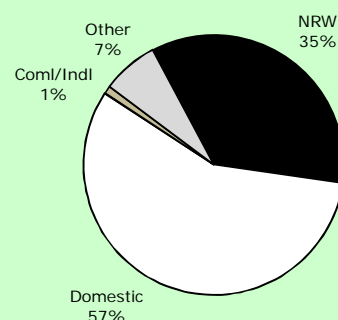
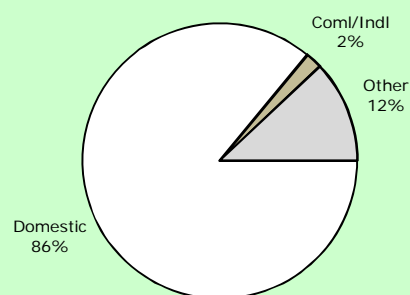
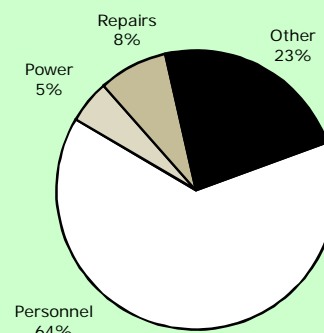
House (7.5 persons/HC)	1,798
Public Tap (38.5 persons/PT)	8
Commercial	15
Industrial	0
Institutional	83
Other	0
Total	1,904

Service Indicators

Service Coverage ⁴	97.2%
Water availability/day	8 hours in dry months 9 hours in wet months
Per Capita Consumption ⁵	93 l/c/d
Average Tariff	NRs17.23/m ³

Efficiency Indicators

Non-Revenue Water ⁶	34.7%
Unit Production Cost	NRs6.82/m ³
Operating Ratio ⁷	0.61
Accounts Receivable	1.0 month
Staff/1,000 Connections	8.4

Notes:¹ The population is for the present area served by the utility.² Of 5 water samples taken in 2014, 4 passed the residual chlorine test.³ This is also the total area of responsibility.⁴ The population not served by the water utility draw water from springs, rivers and streams.⁵ This is based on the total consumption from all connections.⁶ There were 35 leaks repaired in 2014 while 178 meters were either replaced or repaired.⁷ The O&M cost does not include debt service of NRs3,071,055.⁸ Other use and billings are for institutional connections; community taps were included under domestic.⁹ Other costs include chemicals, transport and miscellaneous expenses.**Data as of 2014.****Annual Water Use⁸**
713,844 m³**Annual Water Billings⁸**
NRs8,034,380**Annual O&M Costs⁹**
NRs4,866,367

Water Utility	SIDDESHWOR WATER SUPPLY USERS AND SANITATION COMMITTEE																										
	Address : Ward No.6, Khambechauri Ratmate, Kamalamai Municipality, Sindhuli District Telephone : +977 047 520572 Fax : none E-mail : none Head : Mahendra Dev Shrestha, Chairperson																										
	Siddeshwor Water Supply Users and Sanitation Committee (SWSUSC) became fully operational in 2009. It is legally registered with the District Water Resource Committee. SWSUSC is responsible for water supply for 5 urban wards of Kamalamai which has a total population of 40,000 people. Its present service area has a population density of 566 persons/km ² . It draws water from 2 river intakes. It has no master development plan but has a water safety plan in place since 2013. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. No personnel attended training in 2014. SWSUSC has a partly developed management information system. Its billing system is computerized.																										
Mission Statement	No mission statement.																										
General Data About Water Utility	<table><tr><td>Connections</td><td>: 2,188</td><td></td></tr><tr><td>Staff</td><td>: 15</td><td></td></tr><tr><td>Annual O&M Costs</td><td>: NRs2,275,778</td><td></td></tr><tr><td>Annual Collections</td><td>: NRs3,919,242</td><td>Other Revenues: NRs835,390</td></tr><tr><td>Annual Billings</td><td>: NRs4,562,581</td><td></td></tr><tr><td>Annual Capital Expenditure</td><td>: NRs1,265,776</td><td>Average capital expenditure/connection/year: NRs578.51</td></tr></table> <p>Siddeshwor Water Supply Users and Sanitation Committee received no assistance from the government, non government organizations or funding agencies in the past year.</p>			Connections	: 2,188		Staff	: 15		Annual O&M Costs	: NRs2,275,778		Annual Collections	: NRs3,919,242	Other Revenues: NRs835,390	Annual Billings	: NRs4,562,581		Annual Capital Expenditure	: NRs1,265,776	Average capital expenditure/connection/year: NRs578.51						
Connections	: 2,188																										
Staff	: 15																										
Annual O&M Costs	: NRs2,275,778																										
Annual Collections	: NRs3,919,242	Other Revenues: NRs835,390																									
Annual Billings	: NRs4,562,581																										
Annual Capital Expenditure	: NRs1,265,776	Average capital expenditure/connection/year: NRs578.51																									
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>House/Commercial</th><th>Institutional</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>135.00</td><td>500.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td><td>(NRs/m³)</td></tr><tr><td>11 - 20</td><td>20.00</td><td>20.00</td></tr><tr><td>21 - 30</td><td>30.00</td><td>30.00</td></tr><tr><td>More than 30 m³</td><td>45.00</td><td>45.00</td></tr></table> <p>Notes:</p> <ol style="list-style-type: none">1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.2. There were 51 new connections in 2014. Price of new domestic connection is NRs9,920 payable prior to connection.3. The urban poor which comprise 5% of the service area population are given subsidized connection charges for community taps.			Category	House/Commercial	Institutional	MINIMUM CHARGE	(NRs)	(NRs)	(First 10 m ³ or less)	135.00	500.00	ADDITIONAL CHARGE			Consumption (m ³)	(NRs/m ³)	(NRs/m ³)	11 - 20	20.00	20.00	21 - 30	30.00	30.00	More than 30 m ³	45.00	45.00
Category	House/Commercial	Institutional																									
MINIMUM CHARGE	(NRs)	(NRs)																									
(First 10 m ³ or less)	135.00	500.00																									
ADDITIONAL CHARGE																											
Consumption (m ³)	(NRs/m ³)	(NRs/m ³)																									
11 - 20	20.00	20.00																									
21 - 30	30.00	30.00																									
More than 30 m ³	45.00	45.00																									
Priority Need of Utility	<table><tr><td>1. Additional water source.</td><td>2. Maintenance of filter plant.</td><td>3. Additional reservoir tank.</td></tr></table>			1. Additional water source.	2. Maintenance of filter plant.	3. Additional reservoir tank.																					
1. Additional water source.	2. Maintenance of filter plant.	3. Additional reservoir tank.																									
Consumer Service	Average monthly consumption is about 11.5 m ³ per connection. The water bill averages NRs173.77 per month per connection. Water is available for only one hour a day to most users both in the dry months and wet months. Average pressure at the tap is 10 meters. Applicants have to wait for 2 days for new connections to be made. Connection fee is paid all at the start. All 2 water samples taken in 2014 passed the residual chlorine test. There were 58 consumer complaints reported and 300 leaks repaired during the year. Consumers can complain in person at the water utility office or by telephone. The service provider allows subsidized connection charges for community taps for groups of urban poor families.																										
Performance Highlights	SWSUSC provides water at only 30 lpcd, the third lowest, to its consumers for an average of 1 hour per day throughout the year to 68.8% of the population in its service area. NRW of 20% is lower than the average with consumption only 77.7% metered and none for production rendering the NRW value unreliable. Operating ratio is good at 0.50 but accounts receivable equivalent at 2.3 months and collection efficiency of only 85.9% both need improvement. Average tariff of NRs15.07/m ³ is more than enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 6.9 is a little lower than the average. SWSUSC has to do more for its consumers starting with more supply per capita, much longer availability in hours per day and serving more people in its service area. This will require increasing tariff to cover the costs involved. It should also meter its production and all connections to have a better determination of its losses. The service provider should collect all its bills in a timely manner. SWSUSC should send its staff to training courses to develop their capacity and increase their productivity. Monitoring of residual chlorine should be according to the national drinking water quality standards.																										

SIDDESHWOR WATER SUPPLY

Population: 39,600 ¹

Production/Distribution

Average Daily Production	1,037 m ³ /d
Groundwater	Nil
Surface Water	100%
Treatment Type ²	Slow sand filter
Treated water storage	734 m ³
Service Area ³	70.0 sq km
Distribution pipes	72.0 km

Service Connections

House (12 persons/HC)	2,017
Public Tap (100 persons/PT)	5
Commercial	93
Industrial	0
Institutional	73
Other	0
Total	2,188

Service Indicators

Service Coverage ⁴	68.8%
Water availability/day	1 hour in dry months 1 hour in wet months
Per Capita Consumption ⁵	30 l/c/d
Average Tariff	NRs15.07/m ³

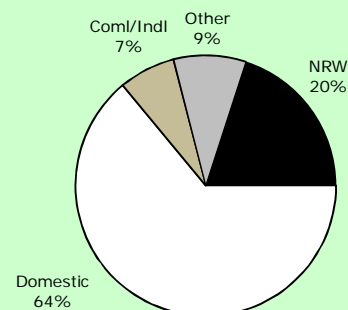
Efficiency Indicators

Non-Revenue Water ⁶	20.0%
Unit Production Cost	NRs6.01/m ³
Operating Ratio ⁷	0.5
Accounts Receivable	2.3 months
Staff/1,000 Connections	6.9

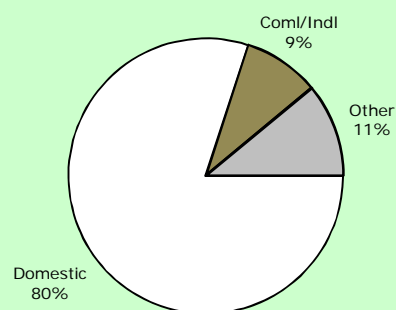
Notes:

- ¹ The population is for the present area served by the utility.
- ² All 2 water samples taken in 2014 passed the residual chlorine test.
- ³ Total area of responsibility is 75 sq. km.
- ⁴ The population not served by the water utility draw water from dug wells, springs, rivers and streams.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 300 leaks repaired in 2014 while 200 meters were either replaced or repaired.
- ⁷ Operating cost does not include debt service of NRs.1,000,000.
- ⁸ Other use and billing are for institutional connections.
- ⁹ Other costs include chemicals and miscellaneous expenses.

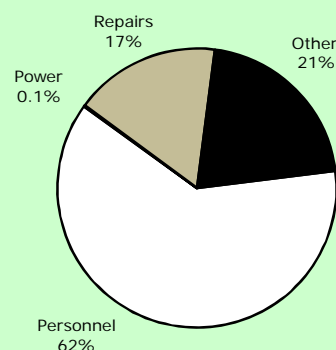
Data as of 2014.



Annual Water Use⁸
378,430 m³



Annual Water Billings⁸
NRs4,562,581



Annual O&M Costs⁹
NRs2,275,778

Water Utility	SIMARA WATER USERS AND SANITATION COMMITTEE																						
	Address : Ward No.1, Panitanki, Gadimai Municipality, Bara District Telephone : +977 053 520503 Fax : none E-mail : simarakhanepani@gmail.com Head : Kasim Hussain, Chairperson																						
	Simara Water Users and Sanitation Committee (SWUSC) became fully operational in 1999. It is legally registered with the District Water Resource Committee. SWUSC is responsible for water supply for 4 urban and rural wards of Gadimai which has a total population of 22,000 people. Its present service area has a population density of 1,100 persons/km ² . It draws water from 6 tubewells of which 5 are operational. It has neither a master development plan nor a water safety plan in place. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. One personnel attended training in 2014 funded out of its own budget. SWUSC has a well developed management information system. Its billing and accounting systems are computerized.																						
Mission Statement	No mission statement.																						
General Data About Water Utility	Connections : 1,998 Staff : 13 Annual O&M Costs : NRs4,265,718 Annual Collections : NRs5,628,619 Annual Billings : NRs4,473,990 Annual Capital Expenditure : NRs1,621,639 Other Revenues: NRs755,000 Average capital expenditure/connection/year: NRs811.63 Simara Water Users and Sanitation Committee received technical and financial assistance from WSSDO Bara for its improvement project and financial assistance from the private sector for boring, pump house and generator in the past year.																						
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>All users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 9 m³ or less)</td><td>60.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>10 - 15</td><td>8.50</td></tr><tr><td>16 - 30</td><td>10.00</td></tr><tr><td>31 - 50</td><td>12.00</td></tr><tr><td>51 - 100</td><td>15.00</td></tr><tr><td>More than 100 m³</td><td>18.00</td></tr></table> <p>Notes:</p> <ol style="list-style-type: none">1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.2. There were 33 new connections in 2014. Price of new domestic connection is NRs8,000 payable prior to connection.3. The urban poor which comprise 10% of the service area population are provided with free water from community taps.			Category	All users	MINIMUM CHARGE	(NRs)	(First 9 m ³ or less)	60.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	10 - 15	8.50	16 - 30	10.00	31 - 50	12.00	51 - 100	15.00	More than 100 m ³	18.00
Category	All users																						
MINIMUM CHARGE	(NRs)																						
(First 9 m ³ or less)	60.00																						
ADDITIONAL CHARGE																							
Consumption (m ³)	(NRs/m ³)																						
10 - 15	8.50																						
16 - 30	10.00																						
31 - 50	12.00																						
51 - 100	15.00																						
More than 100 m ³	18.00																						
Priority Need of Utility	1. Replacement of old pipelines. 2. Construction of overhead tank at Gadimai Ward No.4. 3. Tap connection extension to the needy ones.																						
Consumer Service	Average monthly consumption is about 20.9 m ³ per connection. The water bill averages NRs186.60 per month per connection. Water is available for 5 hours a day to most users in the dry months and 7 hours a day in the wet months. Average pressure at the tap is 9 meters. SWUSC have no water capacity for new connections to be made. Connection fee is paid all at the start. No water samples were taken in 2014 for the residual chlorine test. There were 387 consumer complaints reported and 430 leaks repaired during the year. Consumers can complain in person at the water utility office, by telephone or letter. The service provider provides free water through community taps for the urban poor.																						
Performance Highlights	SWUSC provides water at 125 lpcd to its consumers for an average of 5 hours per day in the dry months and 7 hours per day in the wet months to only half of the population in its service area. NRW of 19.4% is lower than the average with consumption 97.8% metered but none for production rendering the NRW value unreliable. Operating ratio is acceptable at 0.95, accounts receivable need improvement at 1.9 months while collection efficiency at 125.8% indicates collection of past arrears. Average tariff of NRs8.95/m ³ is eighth lowest and is barely enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 6.5 is better than the average. While providing more than enough supply per capita, SWUSC can only serve half of its mandated population and only for 5-7 hours per day which it needs to address with additional sources and more reliable power generators. It should also meter its production and all connections to have a better determination of its losses. SWUSC should send more staff to training courses to develop their capacity and increase their productivity. It should monitor residual chlorine content to check on the effectiveness of chlorination treatment according to the national drinking water quality standards.																						

SIMARA WATER SUPPLY

Population: 11,000 ¹

Production/Distribution

Average Daily Production	1,699 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Chlorination
Raw water storage	675 m ³
Service Area ³	10.0 sq km
Distribution pipes	18.0 km

Service Connections

House (6 persons/HC)	1,952
Public Tap (65 persons/PT)	16
Commercial	0
Industrial	0
Institutional	30
Other	0
Total	1,998

Service Indicators

Service Coverage ⁴	50.0%
Water availability/day	5 hours in dry months 7 hours in wet months
Per Capita Consumption ⁵	125 l/c/d
Average Tariff	NRs8.95/m ³

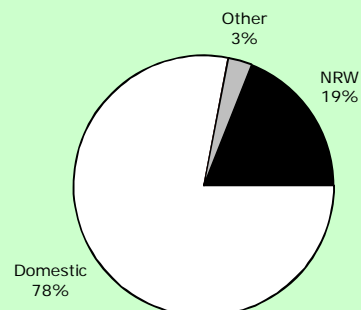
Efficiency Indicators

Non-Revenue Water ⁶	19.4%
Unit Production Cost	NRs6.88/m ³
Operating Ratio ⁷	0.95
Accounts Receivable	1.8 months
Staff/1,000 Connections	6.5

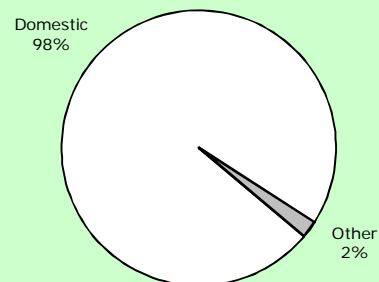
Notes:

- ¹ The population is for the present area served by the utility.
- ² No water samples were taken in 2014 for residual chlorine test.
- ³ Total area of responsibility is 20.0 sq. km.
- ⁴ The population not served by the water utility draw water from tubewells.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 430 leaks repaired in 2014 while 403 meters were either replaced or repaired.
- ⁷ The water service provider had no debt service in 2014.
- ⁸ Other use and billing are from institutional connections.
- ⁹ Other costs include transport and miscellaneous expenses.

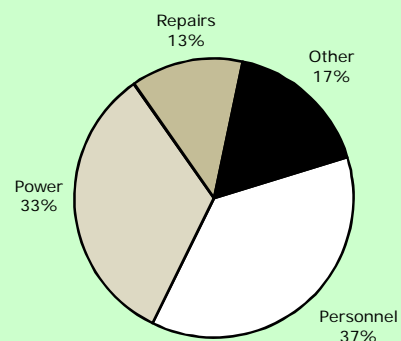
Data as of 2014.



Annual Water Use⁸
620,000 m³



Annual Water Billings⁸
NRs4,473,990



Annual O&M Costs
NRs4,265,718

Water Utility	SUNWAL WATER SUPPLY AND SANITATION COMMITTEE																		
	Address : Ward No.1, Banaha, Sunwal Municipality, Nawalparasi District Telephone : +977 078 570530 Fax : +977 078 570206 E-mail : sobha_sharma2011@yahoo.com Head : Than Prasad Gaire, Chairman																		
	Sunwal Water Supply and Sanitation Committee (SWSSC) became fully operational in 2008. It is legally registered with the District Water Resource Committee. SWSSC is responsible for water supply for 7 urban wards of Sunwal Municipality which has a total population of 20,000 people. Its present service area has a population density of 194 persons/km ² . It draws water from 3 tubewells. SWSSC has no master development plan but has a water safety plan in place since 2012. The service provider has an annual report for 2013 that is available to the public as well as an audited financial report for 2014. One personnel attended training provided by DWSS in 2014. SWSSC has a partly developed management information system. Its billing system is computerized.																		
Mission Statement	No mission statement.																		
General Data About Water Utility	Connections : 1,800 Staff : 12 Annual O&M Costs : NRs2,464,594 Annual Collections : NRs3,375,887 Annual Billings : NRs3,552,148 Annual Capital Expenditure : NRs3,951,405 Other Revenues: NRs1,405,575 Average capital expenditure/connection/year: NRs2,195.23 Sunwal Water Supply and Sanitation Committee received financial and technical assistance from the Sunwal Municipality, Nawalparasi DDC and DWSSDO in the past year.																		
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>All Users ½" connection</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>150.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>11 – 20</td><td>15.00</td></tr><tr><td>21 – 30</td><td>16.00</td></tr><tr><td>More than 30 m³</td><td>18.00</td></tr></table> <p>Notes:</p> <ol style="list-style-type: none">1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.2. There were 132 new connections in 2014. Price of new domestic connection is NRs10,010 payable prior to connection.3. The urban poor which comprise 20% of the service area population are given 50% subsidy in installation charges with the physically challenged and lower caste.			Category	All Users ½" connection	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	150.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	11 – 20	15.00	21 – 30	16.00	More than 30 m ³	18.00
Category	All Users ½" connection																		
MINIMUM CHARGE	(NRs)																		
(First 10 m ³ or less)	150.00																		
ADDITIONAL CHARGE																			
Consumption (m ³)	(NRs/m ³)																		
11 – 20	15.00																		
21 – 30	16.00																		
More than 30 m ³	18.00																		
Priority Need of Utility	1. SWSSC as a high quality water service provider. 2. Consumer awareness of safe drinking water. 3. Spring water source from hill.																		
Consumer Service	Average monthly consumption is only 5.7 m ³ per connection. The water bill averages NRs164.45 per month per connection. Water is available 12 hours a day to most users in the wet months and 10 hours per day in the dry months. Average pressure at the tap is 6 meters. Applicants have to wait for 15 days for new connections to be made. Connection fee is paid all at the start. Only 2 water samples were taken during the year and both passed the residual chlorine test. There were 168 consumer complaints recorded and 168 leaks were repaired during the year. Consumers can complain in person at the water utility office, by telephone or by writing a letter. The service provider allows 50% subsidy for installation charges for the urban poor.																		
Performance Highlights	SWSSC provides water at only 27 lpcd, the lowest, to its consumers for an average of 12 hours per day in the dry months and 10 hours per day in the wet months to 63% of the population in its service area. NRW of 47.7% is second highest with consumption 100% metered and production not metered at all making the NRW value an estimate at best. Financial management is acceptable with operating ratio of 0.69, collection efficiency of 95% and accounts receivable equivalent of 1.0 month. Average tariff of NRs28.82/m ³ is fourth highest which is enough to raise revenues to cover O&M expenses. Staff/1000 connections ratio at 6.7 is better than average. SWSSC should provide more water for longer hours and expand its coverage which will require new water sources with corresponding tariff adjustment. NRW should be reduced starting with full metering of production to determine the real extent of losses. It should collect all its bill payments. SWSSC has a difficult task of developing new sources and increasing tariff as its tariff is already among the highest. The service provider should provide more training to its staff and properly monitor residual chlorine according to the national drinking water quality standards.																		

SUNWAL WATER SUPPLYPopulation: 15,500 ¹**Production/Distribution**

Average Daily Production	645 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Chlorination
Raw water storage	800 m ³
Service Area ³	80.0 sq km
Distribution pipes	82.0 km

Service Connections

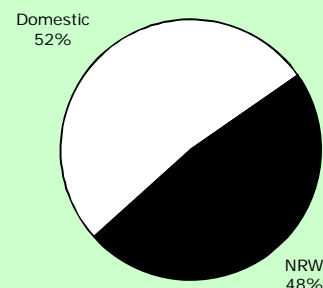
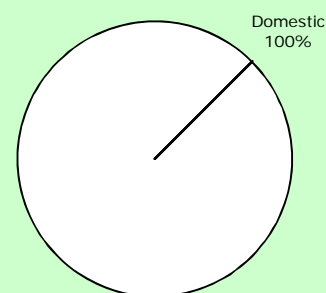
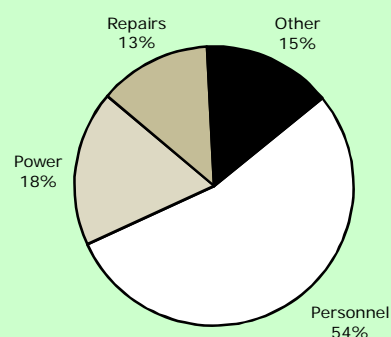
House (7 persons/HC)	1,800
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	1,800

Service Indicators

Service Coverage ⁴	63.0%
Water availability/day	12 hours in dry months 10 hours in wet months
Per Capita Consumption ⁵	27 l/c/d
Average Tariff	NRs28.82/m ³

Efficiency Indicators

Non-Revenue Water ⁶	47.7%
Unit Production Cost	NRs10.46/m ³
Operating Ratio ⁷	0.69
Accounts Receivable	1.0 month
Staff/1,000 Connections	6.7

Notes:¹ The population is for the present area served by the utility.² Only 2 water samples taken in 2012 and both passed the residual chlorine test.³ The original area of responsibility was only 68.0 sq km.⁴ The population not served by the water utility draw water from tubewells, springs, rivers and streams.⁵ This is based on the total consumption which are all domestic.⁶ There were 168 leaks repaired in 2014 while 1,186 meters were either replaced or repaired.⁷ Operating cost does not include debt service of NRs1,524,348.⁸ All use and billings are for house connections.⁹ Other costs include chemical, transport and miscellaneous expenses.**Data as of 2014.****Annual Water Use⁸**
123,241 m³**Annual Water Billings⁸**
NRs3,552,148**Annual O&M Costs⁹**
NRs2,464,594

Water Utility	SURUNGA WATER SUPPLY AND SANITATION USERS ASSOCIATION																						
	Address : Ward No.5, Surunga, Kankai Municipality, Jhapa District Telephone : +977 023 550 095 Fax : +977 023 550 495 E-mail : none Head : Prem Prasad Dahal, Chairperson																						
	Surunga Water Supply and Sanitation Users Association (SWSSUA) became fully operational in 2007. It is legally registered with the District Water Resource Committee. SWSSUA is responsible for water supply for 4 urban and rural wards of Surunga VDC which has a total population of 21,632 people. Its present service area has a population density of 385 persons/km ² . It draws water from two wells both of which are currently operational. It has a master development plan covering 2012 to 2016 and a water safety plan in place since 2009. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. No personnel attended training in 2014. SWSSUA has a partially developed management information system while its billing operations are computerized.																						
Mission Statement	No mission statement.																						
General Data About Water Utility	Connections : 2,282 Staff : 10 Annual O&M Costs : NRs3,604,318 Annual Collections : NRs7,745,657 Annual Billings : NRs8,236,253 Annual Capital Expenditure : NRs 591,810 Other Revenues: NRs2,148,469 Average capital expenditure/connection/year: NRs259.34 Surunga Water Supply and Sanitation Users Association received financial assistance from the local VDC, district development committee and UN-Habitat while the project management office provided technical assistance.																						
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>All Users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 6 m³ or less)</td><td>120.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>7 - 10 m³</td><td>20.00</td></tr><tr><td>11 - 20 m³</td><td>28.00</td></tr><tr><td>21 - 30 m³</td><td>36.00</td></tr><tr><td>31 - 40 m³</td><td>44.00</td></tr><tr><td>More than 40 m³</td><td>52.00</td></tr></table> <p>Notes:</p> <ol style="list-style-type: none">1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office.2. There were 263 new connections in 2014. Price of new domestic connection is NRs8,500 payable prior to connection.3. The urban poor which comprise 12% of the service area population benefits from subsidized connection fee and installment payment.			Category	All Users	MINIMUM CHARGE	(NRs)	(First 6 m ³ or less)	120.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	7 - 10 m ³	20.00	11 - 20 m ³	28.00	21 - 30 m ³	36.00	31 - 40 m ³	44.00	More than 40 m ³	52.00
Category	All Users																						
MINIMUM CHARGE	(NRs)																						
(First 6 m ³ or less)	120.00																						
ADDITIONAL CHARGE																							
Consumption (m ³)	(NRs/m ³)																						
7 - 10 m ³	20.00																						
11 - 20 m ³	28.00																						
21 - 30 m ³	36.00																						
31 - 40 m ³	44.00																						
More than 40 m ³	52.00																						
Priority Need of Utility	1. 24 hours quality water supply. 2. Provide water to the whole Surunga VDC. 3. Develop new bore wells/new sources of water.																						
Consumer Service	Average monthly consumption is about 10.9 m ³ per connection. The water bill averages NRs300.77 per month per connection. Water is available 24 hours a day to most users in both wet and dry months with the use of power generators as backup. Average pressure at the tap is 5 meters. Applicants have to wait for about 5 days for new connections to be made. Connection fee is paid all at the start. All 66 water samples taken in 2014 passed the residual chlorine test. No data for consumer complaints were reported but 120 leaks were repaired during the year. No information was provided on how to make complaints to the service provider. The service provider has a micro finance program to help the urban poor connect to the water system at a subsidized rate and in installment within a year.																						
Performance Highlights	SWSSUA provides water at 65 lpcd to its consumers for an average of 24 hours per day throughout the year to 57.8% of the population in its service area. NRW of 9.4% is good at seventh lowest with consumption fully metered but not for production rendering the NRW value unreliable. Operating ratio is the lowest at 0.44, accounts receivable good at 0.7 month although collection efficiency at 94% needs some improvement. Average tariff of NRs27.68/m ³ is fifth highest which is more than enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 4.4 is good at just outside the top quartile. With a low operating ratio, SWSSUA may be able to develop new sources to increase water supply to customers and expand coverage without increasing tariff. It should meter its production to have a better determination of its losses. SWSSUA should send its staff to training courses to develop their capacity and increase their productivity.																						

SURUNGA WATER SUPPLY

Population: 17,306 ¹

Production/Distribution

Average Daily Production	900 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Pressure filter
Treated water storage	450 m ³
Service Area ³	45.0 sq km
Distribution pipes	45.0 km

Service Connections

House (5.5 persons/HC)	2,282
Public Tap	0
Commercial	0
Industrial	0
Institutional	0
Other	0
Total	2,282

Service Indicators

Service Coverage ⁴	57.8%
Water availability/day	24 hours in dry months 24 hours in wet months
Per Capita Consumption ⁵	65 l/c/d
Average Tariff	NRs27.68/m ³

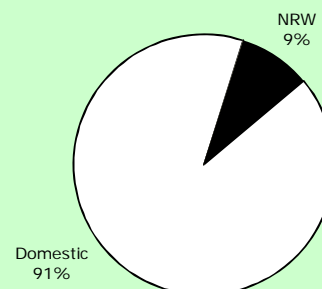
Efficiency Indicators

Non-Revenue Water ⁶	9.4%
Unit Production Cost	NRs10.97/m ³
Operating Ratio ⁷	0.44
Accounts Receivable	0.7 month
Staff/1,000 Connections	4.4

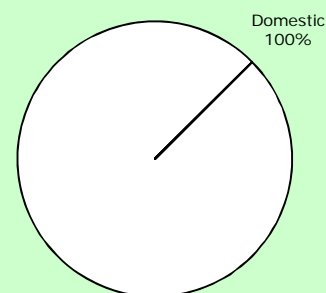
Notes:

- ¹ The population is for the present area served by the utility.
- ² All 66 water samples taken in 2014 passed the residual chlorine test.
- ³ This service area expanded from the original area of responsibility of 35.0 sq. km.
- ⁴ The population not served by the water utility draw water from tubewells.
- ⁵ This is based on the total consumption which is all from domestic connections.
- ⁶ There were 120 leaks repaired in 2014 but no meters replaced nor repaired.
- ⁷ This does not include debt service of NRs3,540,372.
- ⁸ The only use and billings come from domestic household connections.
- ⁹ Other costs include chemicals and miscellaneous expenses.

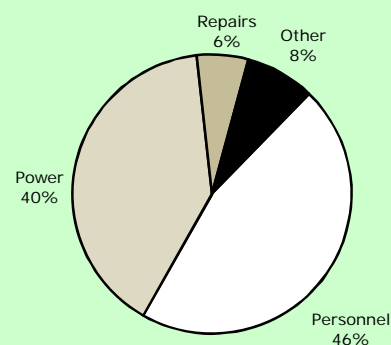
Data as of 2014.



Annual Water Use⁸
328,500 m³



Annual Water Billings⁸
NRs8,236,253



Annual O&M Costs⁹
NRs3,604,318

Water Utility	TANKISINWARI WATER SUPPLY USERS AND SANITATION COMMITTEE																				
	Address : Ward No.6, Nemuwa, Tankisinwari, Morang District Telephone : +977 021 421100 Fax : none E-mail : rajankc222@gmail.com Head : Shiva Narayan Mandal, Chairperson																				
	Tankisinwari Water Supply Users and Sanitation Committee (TWUSC) became fully operational in 2008. It is legally registered with the District Development Committee. TWUSC is responsible for water supply for 10 urban and rural wards of Tankisinwari and Hathimuda VDCs which has a total population of 30,000 people. Its present service area has a population density of 727 persons/km ² . It draws water from two wells of which only one is currently operational. It has a master development plan covering 2013 to 2027 but no water safety plan in place. The service provider has an annual report for 2012 that is available to the public as well as an audited financial report for the same year. Three personnel attended training in 2014 spending 1% of the total operating budget. TWUSC has a partially developed management information system. None of its operations is computerized.																				
Mission Statement	No mission statement.																				
General Data About Water Utility	Connections : 1,040 Staff : 7 Annual O&M Costs : NRs3,624,195 Annual Collections : NRs2,449,001 Annual Billings : NRs2,873,789 Annual Capital Expenditure : NRs 615,000 Other Revenues: NRs1,834,745 Average capital expenditure/connection/year: NRs591.35 Tankisinwari Water Supply Users and Sanitation Committee received financial assistance from Tankisinwari VDC for its production and distribution facilities.																				
Tariff Structure	(Used in 2014) <table><tr><th>Category</th><th>All Users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>115.00</td></tr><tr><td>COMMODITY CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>11 - 15</td><td>15.00</td></tr><tr><td>16 - 20</td><td>16.00</td></tr><tr><td>21 - 25</td><td>20.00</td></tr><tr><td>More than 25 m³</td><td>25.00</td></tr></table> Notes: 1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office or its bill collector. 2. There were 200 new connections in 2014. Price of new domestic connection is NRs3,000 payable prior to connection. 3. The urban poor which comprise 25% of the service area population have will have free water from public taps upon request.			Category	All Users	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	115.00	COMMODITY CHARGE		Consumption (m ³)	(NRs/m ³)	11 - 15	15.00	16 - 20	16.00	21 - 25	20.00	More than 25 m ³	25.00
Category	All Users																				
MINIMUM CHARGE	(NRs)																				
(First 10 m ³ or less)	115.00																				
COMMODITY CHARGE																					
Consumption (m ³)	(NRs/m ³)																				
11 - 15	15.00																				
16 - 20	16.00																				
21 - 25	20.00																				
More than 25 m ³	25.00																				
Priority Need of Utility	1. Administrative building. 2. Water filter treatment facility. 3. Computerization facilities and software.																				
Consumer Service	Average monthly consumption is about 17.1 m ³ per connection. The water bill averages NRs230.27 per month per connection. Water is available 11 hours a day to most users in both wet and dry months. Average pressure at the tap is 11 meters. Applicants have to wait for 3 – 7 days for new connections to be made. Connection fee is paid all at the start. Both water samples taken in 2014 passed the residual chlorine test. There were 400 consumer complaints recorded while 450 leaks were repaired during the year. Consumers can complain in person at the water utility office or by telephone. The service provider free water from public taps upon request from the urban poor communities.																				
Performance Highlights	TWUSC provides water at 74 lpcd to its consumers for an average of 11 hours per day throughout the year to 26.2% of the population in its service area, the third lowest coverage. NRW of 12.4% is almost in the top quartile. Production is fully metered while consumption is 98.5% metered. Financial management needs improvement with operating ratio of 1.26, accounts receivable equivalent of 1.8 months and collection efficiency of 85.2%. Average tariff of NRs13.50/m ³ is below average but not enough to cover O&M costs. Staff/1000 connections ratio at 6.7 is lower than average. TWUSC rates low in customer satisfaction and may need to develop new sources to provide more water to its customers, increase coverage and have longer water availability with the use of power generators. This may require increasing tariff to cover development costs and O&M expenses adequately. The service provider will also have to collect all its billings and in a timely basis. It has to train more staff to develop their skills and monitor residual chlorine according to the national drinking water quality standards.																				

TANKISINWARI WATER SUPPLY

Population: 8,000 ¹

Production/Distribution

Average Daily Production	666 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Chlorination
Raw water storage	225 m ³
Service Area ³	11.0 sq km
Distribution pipes	25.0 km

Service Connections

House (6 persons/HC)	1,026
Public Tap (150 persons/PT)	2
Commercial	0
Industrial	12
Institutional	0
Other	0
Total	1,040

Service Indicators

Service Coverage ⁴	26.2%
Water availability/day	11 hours in dry months 11 hours in wet months
Per Capita Consumption ⁵	74 l/c/d
Average Tariff	NRs13.50/m ³

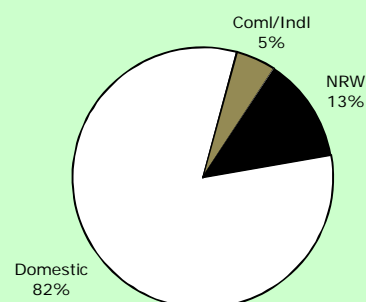
Efficiency Indicators

Non-Revenue Water ⁶	12.4%
Unit Production Cost	NRs14.91/m ³
Operating Ratio ⁷	1.26
Accounts Receivable	1.8 months
Staff/1,000 Connections	6.7

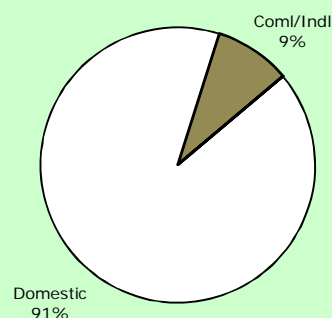
Notes:

- ¹ The population is for the present area served by the utility.
- ² Both 2 water samples taken in 2014 passed the residual chlorine test.
- ³ The total area of responsibility is 19 sq. km.
- ⁴ The population not served by the water utility draw water from tubewells.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 450 leaks repaired in 2014 while 16 meters were either replaced or repaired.
- ⁷ The water service provider had a debt service of NRs320,000 in 2014.
- ⁸ Other use and billing are for institutional connections.
- ⁹ Other costs include chemicals, transport and miscellaneous expenses.

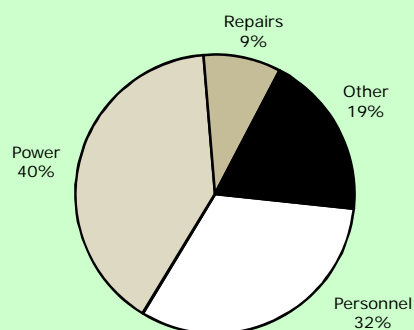
Data as of 2014.



Annual Water Use⁸
243,020 m³



Annual Water Billings⁸
NRs2,873,789



Annual O&M Costs⁹
NRs3,624,195

Water Utility	NEPAL WATER SUPPLY CORPORATION, TAULIHAWA														
	Address : Ward No.2, Aadarsa Tole, Taulihawa Municipality, Kapilvastu District Telephone : +977 076 560535 Fax : +977 076 560535 E-mail : nwsctaulihwa@gmail.com Head : Suresh Kumar Mahato, Officer-in-charge														
	Nepal Water Supply Corporation, Taulihawa (NWSC Taulihawa) became fully operational in 1999. It is legally registered under the NWSC Act 1989. NWSC Taulihawa is responsible for water supply for 8 urban wards of Taulihawa Municipality which has a total population of 40,000 people. Its present service area has a population density of 3,750 persons/km ² . It draws water from 3 tubewells of which only one is operational. It has neither a master development plan nor a water safety plan in place. The service provider has a annual report for 2013 and an audited financial report for the same year. One personnel attended training in 2014. NWSC Taulihawa has a well developed management information system. None of its operations is computerized.														
Mission Statement	No mission statement.														
General Data About Water Utility	Connections : 902 Staff : 10 Annual O&M Costs : NRs5,599,860 Annual Collections : NRs1,969,196 Annual Billings : NRs1,781,988 Annual Capital Expenditure : Nil Other Revenues: NRs67,066 Average capital expenditure/connection/year: Nil Nepal Water Supply Corporation, Taulihawa received financial assistance from the government for its production and distribution systems in the past year.														
Tariff Structure	<p>(Used in 2014)</p> <table><tr><th>Category</th><th>All Users</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>50.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td></tr><tr><td>More than 10 m³</td><td>15.00</td></tr></table> <p>Unmetered connections pay a flat rate of NRs360 per month.</p> <p>Notes:</p> <p>1. All consumers pay on metered use or flat rate. Consumers are billed monthly. Water bills are paid at the water service provider's office.</p> <p>2. There were 35 new connections in 2014. Price of new domestic connection is NRs4,215 payable prior to connection.</p> <p>3. The urban poor which comprise 5% of the service area population are provided with public taps with free water.</p>			Category	All Users	MINIMUM CHARGE	(NRs)	(First 10 m ³ or less)	50.00	ADDITIONAL CHARGE		Consumption (m ³)	(NRs/m ³)	More than 10 m ³	15.00
Category	All Users														
MINIMUM CHARGE	(NRs)														
(First 10 m ³ or less)	50.00														
ADDITIONAL CHARGE															
Consumption (m ³)	(NRs/m ³)														
More than 10 m ³	15.00														
Priority Need of Utility	1. Pipeline extension. 2. Tubewells construction. 3. Water treatment plant.														
Consumer Service	Average monthly consumption is about 27.7 m ³ per connection. The water bill averages NRs164.63 per month per connection. Water is available for 5 hours a day to most users during both the dry months and the wet months. Average pressure at the tap is 3 meters. Applicants have to wait for 2 days for new connections to be made. Connection fee is paid all at the start. No water samples were taken during the year for residual chlorine test. There were 200 consumer complaints recorded and 50 leaks repaired during the year. Consumers can complain in person at the water utility office, by telephone or letter. The service provider provides free public tap water to the urban poor.														
Performance Highlights	NWSC Taulihawa provides water at 73 lpcd to its consumers for an average of 5 hours per day throughout the year to only 28% of the population in its service area. NRW of 22.2% is just above the average with production not metered and consumption 99.1% metered making the NRW value questionable. Financial management is mixed with operating ratio at 3.14, accounts receivable equivalent of 0.5 month and collection efficiency of 110.5% suggesting collection of past arrears. Average tariff of NRs5.95/m ³ is third lowest and not enough to cover operating expenses. Staff/1000 connections ratio at 11.1 is fifth highest. The service provider may have to develop new sources to serve about ¾ of the population in its service area and install reliable power generators to extend availability to much more than 5 hours per day. The very low tariff will have to be increased to cover capital and O&M costs. Production should be metered to determine the real NRW level. NWSC Taulihawa should send more staff to training courses to develop their capacity and increase their productivity. It should monitor residual chlorine according to the national drinking water quality standards to check on the effectiveness of its chlorination treatment.														

TAULIHAWA WATER SUPPLY

Population: 15,000 ¹

Production/Distribution

Average Daily Production	1,055 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Chlorination
Treated water storage	450 m ³
Service Area ³	4.0 sq km
Distribution pipes	15.0 km

Service Connections

House (12 persons/HC)	870
Public Tap (200 persons/PT)	2
Commercial	0
Industrial	0
Institutional	30
Other	0
Total	902

Service Indicators

Service Coverage ⁴	28.0%
Water availability/day	5 hours in dry months 5 hours in wet months
Per Capita Consumption ⁵	73 l/c/d
Average Tariff	NRs5.95/m ³

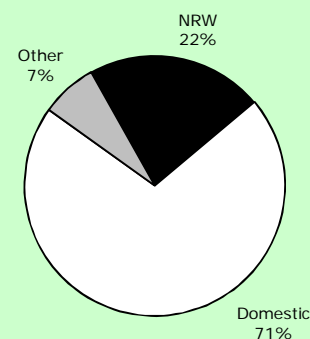
Efficiency Indicators

Non-Revenue Water ⁶	22.2%
Unit Production Cost	NRs14.55/m ³
Operating Ratio ⁷	3.14
Accounts Receivable	0.5 month
Staff/1,000 Connections	11.1

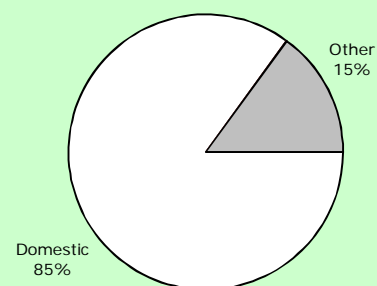
Notes:

- ¹ The population is for the present area served by the utility.
- ² No water samples were taken in 2014 for residual chlorine test.
- ³ Total area of responsibility is 6.0 sq. km.
- ⁴ The population not served by the water utility draw water from other piped water service providers and tube wells.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 50 leaks repaired in 2014 while 50 meters were either replaced or repaired.
- ⁷ The water service provider had no debt service in 2014.
- ⁸ Other use and billing are for institutional connections.
- ⁹ Other costs include chemicals and miscellaneous expenses.

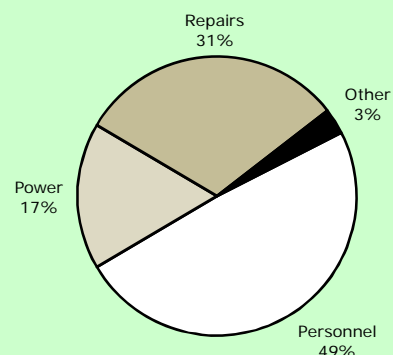
Data as of 2014.



Annual Water Use⁸
385,000 m³



Annual Water Billings⁸
NRs1,781,988



Annual O&M Costs
NRs5,599,860

Water Utility	TULSIPUR WATER SUPPLY AND SANITATION USERS ASSOCIATION Address : Ward No.5, Salyan Road, Tulsipur Municipality, Dang District Telephone : +977 082 522670 Fax : +977 082 522670 E-mail : tulsipurwatersupplyproject@gmail.com Head : Khem Raj Oli, Chairperson <p>Tulsipur Water Supply and Sanitation Users Association (TWSSUA) became fully operational in 1996. It is legally registered with the District Water Resource Committee. TWSSUA is responsible for water supply for 15 urban and rural wards of Tulsipur and Tarigaun VDC which has a total population of 90,000 people. No data was given on the size of the present service area. It draws water from 7 spring intakes and 6 tubewells of which 5 are operational. It has neither a master development plan nor a water safety plan in place. The service provider has an annual report for 2014 that is available to the public as well as an audited financial report for the same year. No personnel attended training in 2014. TWSSUA has a partly developed management information system. Its billing system is computerized.</p>																														
Mission Statement	No mission statement.																														
General Data About Water Utility	Connections : 4,716 Staff : 34 Annual O&M Costs : NRs12,920,742 Annual Collections : NRs16,684,023 Annual Billings : NRs17,865,060 Annual Capital Expenditure : Nil Other Revenues: NRs4,190,200 Average capital expenditure/connection/year: Nil <p>Tulsipur Water Supply and Sanitation Users Association received financial assistance from the small town water supply project for construction of facilities in the past year.</p>																														
Tariff Structure	(Used in 2014) <table border="1"> <thead> <tr> <th>Category</th><th>House</th><th>Industrial/Institutional</th><th>Community Taps</th></tr> </thead> <tbody> <tr> <td>MINIMUM CHARGE</td><td>(NRs)</td><td>(NRs)</td><td>(NRs)</td></tr> <tr> <td>(First 10 m³ or less)</td><td>150.00</td><td>350.00</td><td>150.00</td></tr> <tr> <td>ADDITIONAL CHARGE</td><td></td><td></td><td>Minimum to 20 m³</td></tr> <tr> <td>Consumption (m³)</td><td>(NRs/m³)</td><td>(NRs/m³)</td><td>(NRs/m³)</td></tr> <tr> <td>11 - 20</td><td>20.00</td><td>20.00</td><td>Still minimum</td></tr> <tr> <td>More than 20 m³</td><td>25.00</td><td>25.00</td><td>25.00</td></tr> </tbody> </table> <p>Notes:</p> <ol style="list-style-type: none"> All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office. There were 480 new connections in 2014. Price of new domestic connection is NRs20,500 payable prior to connection. The urban poor which comprise 20% of the service area population are provided with water from community taps. 			Category	House	Industrial/Institutional	Community Taps	MINIMUM CHARGE	(NRs)	(NRs)	(NRs)	(First 10 m ³ or less)	150.00	350.00	150.00	ADDITIONAL CHARGE			Minimum to 20 m ³	Consumption (m ³)	(NRs/m ³)	(NRs/m ³)	(NRs/m ³)	11 - 20	20.00	20.00	Still minimum	More than 20 m ³	25.00	25.00	25.00
Category	House	Industrial/Institutional	Community Taps																												
MINIMUM CHARGE	(NRs)	(NRs)	(NRs)																												
(First 10 m ³ or less)	150.00	350.00	150.00																												
ADDITIONAL CHARGE			Minimum to 20 m ³																												
Consumption (m ³)	(NRs/m ³)	(NRs/m ³)	(NRs/m ³)																												
11 - 20	20.00	20.00	Still minimum																												
More than 20 m ³	25.00	25.00	25.00																												
Priority Need of Utility	1. Overhead water storage tank. 2. Deep boring. 3. Extension of distribution pipeline.																														
Consumer Service	Average monthly consumption is about 14.7 m ³ per connection. The water bill averages NRs315.68 per month per connection. Water is available for 4 hours a day to most users in both the dry months and wet months. Average pressure at the tap is 3 meters. Applicants have to wait for more than a year for new connections to be made due to scarcity of supply. Connection fee is paid all at the start. No water samples were taken in 2014 for the residual chlorine test. There were 1,375 consumer complaints reported and 750 leaks repaired during the year. Consumers can complain in person at the water utility office or by telephone. The service provider provides community taps for the urban poor.																														
Performance Highlights	TWSSUA provides water at only 33 lpcd to its consumers for an average of 4 hours per day throughout the year to 77.8% of the population in its service area. NRW of 32.9% is in the bottom quartile with the highest NRW with production and consumption fully metered. Financial management is good with operating ratio of 0.72 and accounts receivable of 0.8 month although collection efficiency at 93.4% needs improvement. Average tariff of NRs21.42/m ³ is in the top quartile among the highest which is more than enough to raise revenues to cover O&M costs. Staff/1000 connections ratio at 7.2 is the average. TWSSUA will have to develop new sources to increase water supply to customers and expand coverage. It will also have to extend availability to more than just 4 hours per day. The service provider should take effort to collect all its bills. Reducing NRW will help it augment its water supply. TWSSUA should send its staff to training courses to develop their capacity and increase their productivity. It should monitor residual chlorine according to the national drinking water quality standards.																														

TULSIPUR WATER SUPPLY

Population: 70,000 ¹

Production/Distribution

Average Daily Production	3,406 m ³ /d
Groundwater	26%
Surface Water	74%
Treatment Type ²	Sedimentation & filtration
Total water storage	1,705 m ³
Service Area ³	no data
Distribution pipes	220.0 km

Service Connections

House (12.3 persons/HC)	4,420
Public Tap (90 persons/PT)	167
Commercial	0
Industrial	32
Institutional	97
Other	0
Total	4,716

Service Indicators

Service Coverage ⁴	77.8%
Water availability/day	4 hours in dry months 4 hours in wet months
Per Capita Consumption ⁵	33 l/c/d
Average Tariff	NRs21.42/m ³

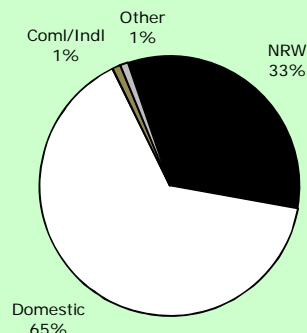
Efficiency Indicators

Non-Revenue Water ⁶	32.9%
Unit Production Cost	NRs10.39/m ³
Operating Ratio ⁷	0.72
Accounts Receivable	0.8 month
Staff/1,000 Connections	7.2

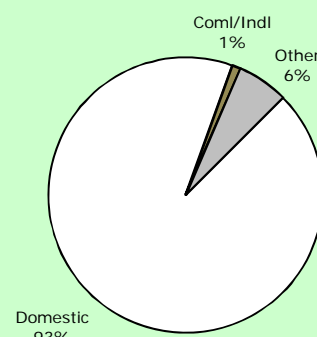
Notes:

- ¹ The population is for the present area served by the utility.
- ² No water samples were taken in 2014 for residual chlorine test.
- ³ No data were available for the size of the present service area or the area of responsibility as designed.
- ⁴ The population not served by the water utility draw water from other piped water service providers, dug wells, springs, rivers and streams.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 750 leaks repaired in 2014 while 650 meters were either replaced or repaired.
- ⁷ Operating cost does not include debt service of NRs.9,014,533.
- ⁸ Other use and billings are for institutional connections.
- ⁹ Other costs include transport, chemicals and miscellaneous expenses.

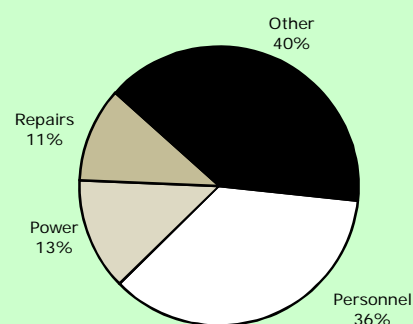
Data as of 2014.



Annual Water Use⁸
1,243,220 m³



Annual Water Billings⁸
NRs17,865,060



Annual O&M Costs⁹
NRs12,920,742

Water Utility	URLABARI WATER SUPPLY USERS AND SANITATION ASSOCIATION																																
	Address : Ward No.3, Khanepani Tole, Urlabari Municipality, Morang District Telephone : +977 021 540 390 or 021 541 890 Fax : none E-mail : raju.bc127@yahoo.com Head : Bhupal Sing Rai, Chairperson																																
	Urlabari Water Supply Users and Sanitation Association (UWSUSA) became fully operational in 2012. It is legally registered with the District Water Resource Committee. UWSUSA is responsible for water supply for 5 urban and rural wards of Urlabari which has a total population of 45,150 people. Its present service area has a population density of 2,209 persons/km ² . It draws water from 3 tubewells 2 of which are currently operational. UWSUSA has a master development plan covering 2013 to 2027 and a water safety plan in place since 2010. The service provider has an annual report for 2014 but is not available to the public. It has an audited financial report for the same year. One personnel attended training in 2014. UWSUSA has a partly developed management information system and computerized billing and accounting systems.																																
Mission Statement	Provide safe and quality water by formulating appropriate policies and strategies.																																
General Data About Water Utility	Connections : 2,225 Staff : 13 Annual O&M Costs : NRs6,689,327 Annual Collections : NRs7,703,210 Annual Billings : NRs7,933,210 Annual Capital Expenditure : NRs2,597,197 Other Revenues: NRs3,892,537 Average capital expenditure/connection/year: NRs1,167.28 Urlabari Water Supply Users and Sanitation Association received technical assistance for its operations from the government through WSSDO in 2014.																																
Tariff Structure	(Used in 2014) <table><tr><th>Category</th><th colspan="2">½" connection</th></tr><tr><td></td><th>House</th><th>Comm'l/ind'l</th></tr><tr><td>MINIMUM CHARGE</td><td>(NRs)</td><td>(NRs)</td></tr><tr><td>(First 10 m³ or less)</td><td>130.00</td><td>2,000.00</td></tr><tr><td>ADDITIONAL CHARGE</td><td></td><td>(up to 40 m³)</td></tr><tr><td>Consumption (m³)</td><td>(NRs/m³)</td><td>(NRs/m³)</td></tr><tr><td>11 - 20</td><td>18.00</td><td>-</td></tr><tr><td>21 - 30</td><td>22.00</td><td>-</td></tr><tr><td>31 - 40</td><td>24.00</td><td>-</td></tr><tr><td>More than 40 m³</td><td>26.00</td><td>26.00</td></tr></table> Notes: 1. All consumers pay on metered use. Consumers are billed monthly. Water bills are paid at the water service provider's office. 2. There were 262 new connections in 2014. Price of new domestic connection is NRs13,600 payable prior to connection. 3. The poor which comprise 17% of the service area population are provided community taps with connection charge payable in 12 months and tariff charges at subsidized minimum charge of NRs150 for 50 cu m.			Category	½" connection			House	Comm'l/ind'l	MINIMUM CHARGE	(NRs)	(NRs)	(First 10 m ³ or less)	130.00	2,000.00	ADDITIONAL CHARGE		(up to 40 m ³)	Consumption (m ³)	(NRs/m ³)	(NRs/m ³)	11 - 20	18.00	-	21 - 30	22.00	-	31 - 40	24.00	-	More than 40 m ³	26.00	26.00
Category	½" connection																																
	House	Comm'l/ind'l																															
MINIMUM CHARGE	(NRs)	(NRs)																															
(First 10 m ³ or less)	130.00	2,000.00																															
ADDITIONAL CHARGE		(up to 40 m ³)																															
Consumption (m ³)	(NRs/m ³)	(NRs/m ³)																															
11 - 20	18.00	-																															
21 - 30	22.00	-																															
31 - 40	24.00	-																															
More than 40 m ³	26.00	26.00																															
Priority Need of Utility	1. To follow 15 years business plan. 2. To deliver quality water. 3. To raise user awareness and feeling of ownership.																																
Consumer Service	Average monthly consumption is about 18.6 m ³ per connection. The water bill averages NRs297.12 per month per connection. Water is available 24 hours a day to most users in both wet and dry months with the use of backup generators. Average pressure at the tap is 5 meters. Applicants have to wait for 7 days for new connections to be made. Connection fee is paid all at the start. All 3 water samples taken in 2014 passed the residual chlorine test. There were 25 consumer complaints recorded while 178 leaks were reported repaired during the year. Consumers can complain in person at the water utility office or by telephone. The service provider provides water to the poor through community taps with subsidized tariff.																																
Performance Highlights	UWSUSA provides water at 62 lpcd to its consumers for an average of 24 hours per day throughout the year to only 48.9% of the population in its service area. NRW of 7.5% is the sixth lowest with production 100% metered and consumption fully metered. Financial management is good with operating ratio at 0.84, accounts receivable equivalent of 0.3 month with collection efficiency of 97.1% needing some improvement. Average tariff of NRs15.95/m ³ is just about the average and enough for revenues to cover operating costs. Staff/1000 connections ratio at 5.8 is just about the median. UWSUSA may need to develop additional sources to increase coverage and provide more water to its customers but it may also have to increase tariff to be able to finance the cost of developing new water sources. It has to collect all its bills. The service provider should send more staff to training courses to develop their capacity and increase productivity. The number of residual chlorine tests will have to be increased according to the national drinking water quality standards.																																

URLABARI WATER SUPPLY

Population: 22,085 ¹

Production/Distribution

Average Daily Production	1,473 m ³ /d
Groundwater	100%
Surface Water	Nil
Treatment Type ²	Pressure filter & aeration
Raw water storage	450 m ³
Service Area ³	10.0 sq km
Distribution pipes	55.0 km

Service Connections

House (9 persons/HC)	2,185
Public Tap	0
Commercial	3
Industrial	0
Institutional	37
Other	0
Total	2,225

Service Indicators

Service Coverage ⁴	48.9%
Water availability/day	24 hours in dry months
	24 hours in wet months
Per Capita Consumption ⁵	62 l/c/d
Average Tariff	NRs15.95/m ³

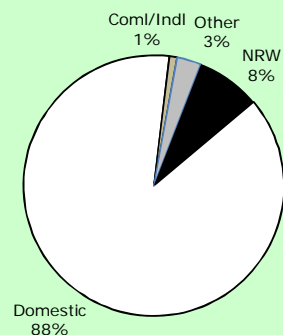
Efficiency Indicators

Non-Revenue Water ⁶	7.5%
Unit Production Cost	NRs12.44/m ³
Operating Ratio ⁷	0.84
Accounts Receivable	0.3 month
Staff/1,000 Connections	5.8

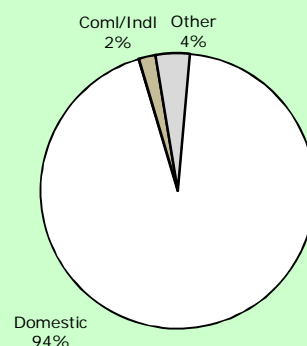
Notes:

- ¹ The population is for the present area served by the utility.
- ² All 3 water samples taken in 2014 passed the residual chlorine test.
- ³ The total area of responsibility is 13 sq. km..
- ⁴ The population not served by the water utility draw water from tubewells and dug wells.
- ⁵ This is based on the total consumption from all connections.
- ⁶ There were 178 leaks repaired in 2014 while 80 meters were either replaced or repaired.
- ⁷ The water service provider has no debt service in 2014.
- ⁸ Other use and billings are for institutional connections.
- ⁹ Other costs include transport, chemicals and miscellaneous expenses.

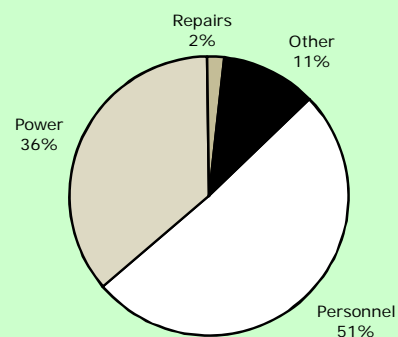
Data as of 2014.



Annual Water Use⁸
537,761 m³



Annual Water Billings⁸
NRs7,933,210



Annual O&M Costs⁹
NRs6,689,327

SECTOR EFFICIENCY IMPROVEMENT UNIT (SEIU)



Government of Nepal
Ministry of Urban Development
Water Supply and Environment Division
Sector Efficiency Improvement Unit (SEIU)

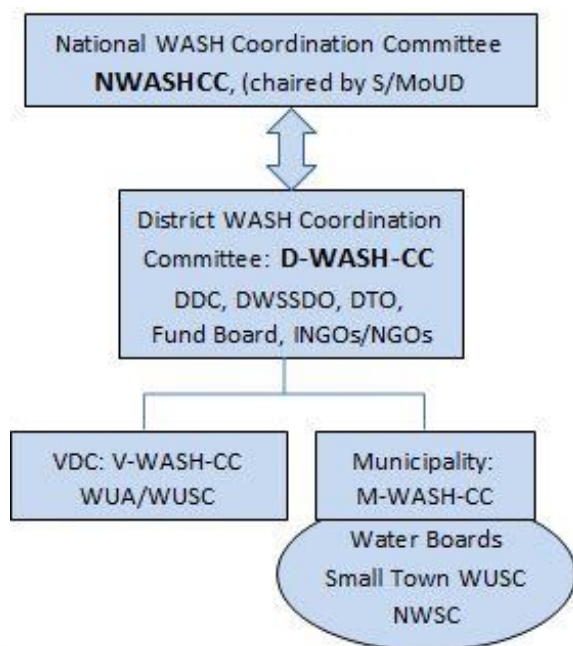
The Sector Efficiency Improvement Unit (SEIU) was established on 31 July 2009 with the objective to arrive at a transparent, accountable, service-oriented and responsive WASH Sector. The Government has institutionalized SEIU on June 2012 as a permanent unit of the Ministry of Urban Development, where it acts as the Secretariat to Sector-wide coordination, planning and monitoring of the water supply and sanitation programmes of the Government of Nepal. The Government of Nepal provides comprehensive support to the sector efficiency improvement processes by ensuring policy harmonization, adequate monitoring and performance assessment, targeted financing and capacity building, and by creating a regulatory framework that protects and encourages good practices in the delivery of WASH services.

SEIU is working on various aspects of sector improvement working closely with all WASH sector partners through a consultative and participatory process. Together, SEIU and sector partners will develop a platform for harmonizing stakeholders' approaches to improve the quality and sustainability of services. It support reviews of (programme) policies and priorities, institutional structures, subsidy arrangements and implementation modalities and increasingly manage learning processes to enhance sector knowledge.

Since mid-2014 MoUD is designing longer term capacity and investment planning through the formulation of the **WASH Sector Development Plan**. The Plan will emphasize government leadership and ownership; a clear division between policy-making and regulation, and implementation; propose measures to improve sector coherence under government leadership and institutions; consolidation, strengthening and retention of technical capacity at all levels; strategy and plans to build decentralized capacity for management and sustained delivery of services; and structured monitoring and reporting. As the 2015 earthquakes have disrupted the planning process somewhat, the SDP is now expected to be in place as of early 2016.



Institutional Development:



The JSRII recommended that the Sector rebalance the WASH coordination committees at various levels to include water supply, sanitation, hygiene and waste water. During the successful national total sanitation movement, the Sector has used the D-WASH-CC mechanism very effectively and learned a lot in the process. The experience can be used to strengthen the D-WASH-CC in its coordination and planning roles, and also provide it with a stronger management and monitoring capacity so that it will pursue local implementation by stakeholders more effectively. In addition, the management capacity of the D-WASH-CC needs to be used to raise functionality and service delivery in all schemes in the district. The Operational Directives 2012, which have started to be rolled out since the beginning of 2015 and other regulatory processes will support this task. DWSS will play an important role by providing technical competence and follow-up, also through its Regional Monitoring and Support Offices.

The relation between the National WASH-CC and the District WASH-CC is quite close, with plenty of interaction through the SEIU as the Secretariat. In turn the D-WASH-CC supports and monitors the VDC and Municipal WASH CC and assists and encourages them in their tasks.

Formulation of a comprehensive WASH Act and Policy for the Sector

SEIU has drafted an umbrella act and policy for the water, sanitation and hygiene sector. The draft policy and act will apply to all government sector agencies, local bodies, government enterprises, non-government organizations, service providers, community based organizations, and private sector. In the draft, Government's sovereign right over natural water sources is recognized and traditional rights of the individual and community protected. The new policy rolls the urban and rural sub-sector policies into a single policy document. The draft umbrella act is available on SEIU's website <http://seiu.gov.np/index.php/new-act>

Human resource development and capacity building strategy

The Training Need Assessment completed in March 2014 by SEIU, with JICA support, showed the gap in training and capacity building in the Sector. Encouraged by strong recommendations during the JSR II, SEIU initiated the formulation of a HRD and capacity building strategy.

The strategy puts forward a pragmatic vision for human resources development for the WASH sector on critical aspects and challenges to ensure sustained capacity building efforts at national and district level, for rural water supply and sanitation schemes and for urban WASH service providers, in line with current government policies.

It lays out strategic recommendations to the MoUD, DWSS, SEIU and National Water Supply and Sanitation Training Centre (NWSSTC, earlier named CHRDU) on how to facilitate access by all stakeholders to effective, relevant and well-designed training and capacity building resources and programs.

The HRD and capacity building strategy has been shared with the NWSSTC management is currently being integrated in the business plan of the Centre.



Benchmarking exercise for Small Town Water Supply Systems



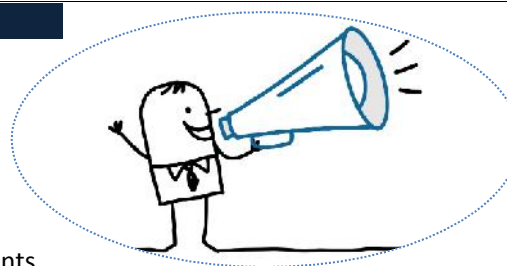
Benchmarking and Performance Assessment of Water Service Providers (WSPs) was started in early 2013 to develop capacity for monitoring functionality and performance of Nepal's water supply service providers as an instrument for improving the service delivery and performance of the urban water supply sector. Three rounds of orientation workshops for WSPs have been conducted so far involving 102 WSPs. In April 2014, a data book was produced with the results on the 32 participating WSPs. A Performance Improvement Planning workshop was conducted for the WSPs included in data book 2012/2013. MIS is under preparation to support the Benchmarking process. This process has been found very useful and effective for the performance improvement planning of WSPs. A next data book will be published in April 2015.

Communication strategy for the sector



Communication is an essential dimension of the sector development plan. A communication strategy, developed, agreed and operationalized by relevant sector stakeholders, is important to inform and get feedback on sector developments and achievements.

Effective communication within the sector is important for greater harmonization and cost-effective resource utilization. Regular communication will contribute to the achievement of broad sectoral goals, objectives and policy agenda. SEIU is currently drafting a communication strategy for the sector through a consultative process. The strategy will support the realization of the approaches, objectives, priority streams and the organizational arrangements in the sector.



SEIU is available on twitter and internet



<https://twitter.com/Nepalwash>



<http://seiu.gov.np/>

