

INSTITUTIONAL CAPACITY ASSESSMENT OF KUKL

FINAL REPORT

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GLOSSARY AND ABBREVIATIONS

ADB	-	Asian Development Bank
BOD	-	Board of Directors
CBP Team	-	Capacity Building and Public-Private Partnership Support Team
CI	-	Cast Iron
CIAA	-	Commission for Investigation of Abuse of Authority
CIAMP	-	Capital Investment and Asset Management Program
DDC	-	District Development Committee
DI	-	Ductile Iron
DMA	-	District Metering Area
DNI	-	Distribution Network Improvement
EA	-	Executing Agency
ENPHO	-	Environment and Public Health Organisation
FNCCI	-	Federation of Nepal Chamber of Commerce and Industries
FY	-	Fiscal Year
GI	-	Galvanized Iron
GIS	-	Geographical Information System
GON	-	Government of Nepal
HDPE	-	High Density Polyethylene
HRD	-	Human Resource Division
JICA	-	Japanese International Cooperation Agency
KMC	-	Kathmandu Municipal Corporation
KUKL	-	Kathmandu Upatyaka Khanepani Limited
KV	-	Kathmandu Valley
KVWSIP	-	Kathmandu Valley Water Supply Improvement Project
KVWSMB	-	Kathmandu Valley Water Supply Management Board
LAN	-	Local Area Network
LICSU	-	Low Income Consumer Support Unit
ML	-	Million Litres
MLD	-	Million Litres per day
MOUD	-	Ministry of Urban Development
MPPW	-	Ministry of Physical Planning and Works
MWSDB	-	Melamchi Water Supply Development Board
MWSP	-	Melamchi Water Supply Project
NGO	-	Non-Government Organization
NPC	-	National Planning Commission
NRW	-	Non Revenue Water
NWSC	-	Nepal Water Supply Corporation
O&M	-	Operation and Maintenance
OPEC	-	Organization of Petroleum Exporting Countries
PPWSA	-	Phnom Pehn Water Supply Authority
PID	-	Project Implementation Directorate
PLC	-	Programmable Logic Controller
PMU	-	Project Management Unit
PPP	-	Public Private Partnership
PPTA	-	Project Preparatory Technical Assistance
PVC	-	Polyvinyl Chloride

SCADA	-	Supervisory Control and Data Acquisition
SOP	-	Standard Operating Procedure
TA	-	Technical Assistance
TNA	-	Training Need Assessment
VRS	-	Voluntary Retirement Scheme
WAN	-	Wide Area Network
WASH	-	Water Sanitation and Hygiene
WQAD	-	Water Quality Assurance Division
WSMB	-	Water Supply Management Board
WSTFC	-	Water Supply Tariff Fixation Commission
WTP	-	Water Treatment Plant

EXECUTIVE SUMMARY

Water Supply Services in Kathmandu Valley

- 1 The Government of Nepal undertook Kathmandu Valley water supply sector reform and established Kathmandu Valley Management Board (KVWSMB) as asset owner, Water supply Tariff Fixation Commission (WSTFC) as economic regulator and Kathmandu Upatyaka Khanepani Limited (KUKL) as utility operator for management of water supply services in Kathmandu Valley. But after a lapse of more than seven years since KUKL took over management of Kathmandu Valley water services, the water supply service level has not improved. Most areas in the valley receive water for about 1-3 hours every 3-5 days during the wet season and about 1-2 hours every 5-10 days during the dry season. The water quality is not reliable and often contaminated with pollutants. The water treatment plants are in need of refurbishment and are in short of operating manpower. The non revenue water is high and is estimated at 35-40%. The revenue collection ratio is about 70% and the total accumulated arrears stands at NPR 1.032 billion. The consumer complaint on quality of service is high.
- 2 In this context, it is felt necessary by the Task Force Committee constituted by the Ministry of Urban Development (MOUD) and consisting of MOUD, WSTFC, KVWSMB, MWSDB, KUKL and JICA to conduct institutional capacity assessment of KUKL and recruited the consultants to conduct the study under the JICA financing. The objective of the study is to identify the current institutional problems in KUKL, analyze the problems and make recommendation for improvement. The consultants worked under the overall guidance of the Committee and finalized the report after presentation to the Committee and submitted.
- 3 The present population of KUKL service area is estimated to be 2.56 million and 90% of this population is served by KUKL. KUKL estimate of water demand in its service area is 370 mld while its supply is limited to about 144 mld in wet season and about 86 mld in dry season. This water supply volume has remained almost constant during last 7 years since the establishment of KUKL despite many water augmentation programs being implemented. There is thus a large gap between demand and the supply. With the service population of about 2.30 million and the unaccounted for water of about 40%, the water availability per capita is only about 38 lpcd in wet season and about 22 lpcd in dry season which is lower than the basic water supply requirement specified by the GON.
- 4 A large infrastructure development project (Melamchi Project) is under implementation to improve infrastructure facilities in Kathmandu Valley with the aim of addition of 170 mld supply through a 27.5 km tunnel inter basin transfer project and construction of a 85 mld water treatment plant. The project also includes construction of a network of 75 km large size bulk transmission mains and 670 km of distribution mains in addition to a large network of distribution network covering main urban areas in Kathmandu and Lalitpur municipalities. An additional funding agreed with Asian Development Bank is expected to cover improvement of distribution networks in Bhaktapur, Madhyapur and Kirtipur municipalities beside constructing necessary bulk distribution network. The completion of these projects is expected to significantly improve the water supply situation in Kathmandu Valley.
- 5 Melamchi Water Supply Development Board (MWSDB) is constructing Melamchi Water Diversion Subproject, comprising of: a) construction of intake structures and tunnel from Melamchi to Sundarijal in Kathmandu Valley and b) construction of water treatment plant. The implementation progress has been lagging behind schedule. The project may be delayed by more than one year to early 2018 at the present progress rate. Project Implementation Directorate (PID) is implementing infrastructural development projects including construction of bulk distribution system and distribution network under the financing of the Asian Development Bank (ADB).

Existing Situational Analysis of KUKL

Organizational and Administrative

- 6 KUKL is governed by a non-executive board consisting of 9 members, 6 representing share holders of the company and 3 independent directors. Two out of three independent director positions are vacant. In recent months KUKL board has not been able to meet regularly to conduct its business due to conflict between the board members and the chairperson on the issue of appointment of the General Manager. The board has not been able to select and appoint a General Manager since last 8 months.
- 7 An Interim General Manager is on board, who has been appointed by the Ministry of Urban Development as per amended bye-law of the company. He will be replaced by the new General Manager once the recruitment process is completed and the new General Manager is appointed by the Board of Directors of KUKL.
- 8 Two highest Management organizational units, the Technical and Financial departments are nonfunctional because the vacancies for Senior Manager Positions have not been filled up. The Water Supply Operations Manager is complementing the responsibility of the Technical Department while Deputy Managers in Administration Division and the Finance Division are complementing the responsibilities of senior managers and reporting directly to the General Manager.
- 9 Planning Division, R & D division and NRW divisions are virtually non-functional due to lack of staff to lead the divisions. The activity of KUKL is mostly focused on routine management of operation of water supply services only.
- 10 There are currently 814 permanent and 56 contract staff. KUKL has also employed 240 people on daily wage basis mostly in assistant level positions (majority in level 1 position). The total staff working in KUKL including contractual and daily wages staff is 1110.
- 11 The analysis of staff data shows that 71.4% of top management positions including General Manager and two Senior Managers are vacant. Similarly about 51.2% of middle management positions are vacant. About 46.2% of technical officer (mainly engineers) positions are vacant. In the support staff category, about 68% of staff positions are filled up by permanent staff and some remaining vacant positions have been filled up by contract staff and daily wage workers. The overall percentage of vacancies in permanent position is 32.4%. The percentage of total staff including contract and daily wages staff currently working in KUKL compared to approved staff is about 92.1% and the total support staff compared to approved number is 98.2%.
- 12 KUKL has initiated action for recruitment of staff in the past by inviting application for vacant posts but these efforts have mostly not been able to produce result due to political pressure and the complaints lodged at CIAA and investigation of CIAA. KUKL had last successfully recruited permanent staff through internal competition in 2013 when it recruited 161 staffs consisting of 26 technical staff and 135 non technical support staff from level 3-5.
- 13 The analysis of staff data show that the technical staff provisioned for some activities like WTP operation, water quality assurance and tanker operation are grossly insufficient for the purpose.
- 14 The age profile of KUKL staff is inclined towards the retiring age limit, and with an exodus of the management staff occurring since the VRS program in 2009, most of the top management staff would have been retired within the next three years. This exodus of management staff will certainly further deteriorate the management capacity of KUKL with all institutional memory gone. The problem is further exacerbated by the fact that the Melamchi Water Supply project is expected to be commissioned at the time of retirement of the management staff. This will have an adverse effect on

the skills, experience and knowledge base of the company. Further, there is no succession plan in the company so that the responsibility would be shouldered by knowledgeable new managers when the old managers retire.

15 Though Job Description has been a mandatory provision to be provided to all staff as per KUKL staff regulation, its practice has just started. KUKL Administrative Division has recently developed job description of top management staff and has issued it to head of the divisions. The job description for other officials and support staff have not been prepared and issued.

16 The following table shows the comparison of provisions in staff regulation of KUKL and Phnom Pehn Water Supply Authority (PPWSA), a highly successful water utility which has risen from problem state to world class water utility in 20 years.

PPWSA	KUKL
Performance Evaluation is well established and carried out based on job description four times a year. Line Managers are responsible for evaluation and discussing face to face with staff. Performance evaluation result is used for decision on performance bonus, annual grade increment, rewarding grade increment and promotion to higher positions, determining training requirements and also punitive measures.	Performance evaluation is not well established and is conducted annually rather subjectively in the absence of job description. The practice of confidential evaluation by immediate supervisors and managers, has not been implementable and acceptable to staff. The annual performance evaluation has been the basis of promotion to higher ranks only and has not served to be a reliable base for any punishment and rewards.
Promotion is based mainly on performance/merit and written exam	Promotion is based on unreliable performance evaluation only or additional written exam
Staff disciplinary measures: Majority of the members present in the meeting of Discipline Council, led by Director General consisting of all Department Chiefs, Chief of Human Resources Section as Secretary of council and an Employee Representative deals with disciplinary issues. The Director General has the authority of sanctions and dismissal.	Staff disciplinary measures: Lengthy process and sanctions are rarely applied. The General Manager has the authority to take sanctions including dismissal for non-officer level staff. BOD has the final authority regarding dismissal of Officer level staff.
Probation period is one to three months	Probation period is usually one year, and six months for women
Management is authorized for staff recruitment based on annual quota approved by the BOD	Staff recruitment down to level of daily wage staff to be recruited by the Staff recruitment committee under the chairmanship of a Board Director.
All Bonuses and allowance are not universal, performance bonus and increment of annual salary based on performance evaluation and positive result of written exam.	All allowances and bonuses are universal
Staff Training/Workshops followed by examination of the trainees. For performance evaluation, passing examination is mandatory.	No such requirements in KUKL
<p>Allowances</p> <ol style="list-style-type: none"> 1. Performance bonus (performance based) 2. Overtime fees 3. Mission fees 4. Health compensation 5. Uniforms and occupational safety materials (Water Charges allowances were removed to force morally other government agencies to pay water charges by showing that even PPWSA staff pay) 	<p>Allowances (All universal)</p> <ol style="list-style-type: none"> 1. Water charges allowances (unmetered ½" connection charge including sewerage charges) 2. Annual function day allowances 3. Overtime, 4. medical costs: one month pay annually 5. Education allowances 6. Uniform allowance 7. Meal allowances 8. Transport allowances 9. Festival allowances equivalent to one month salary, applicable for daily wages staff also.

Working hours: 48 hours a week	Working hours: 40 hours a week in summer and 35 hours a week in winter.
Leave entitlements Annual Home leave 18 days Sick leave up to 2 months with full pay, 3 to 6 months with 60% pay, 7 to 12 months with 30% pay, retirement if more than 12 months on account loss of physical capacity to work.	Leave entitlements Annual home leave 30 days Festival leave 6 days, Casual holiday 6 days per annum Sick leaves 12 days per annum
Other Special Event Paid Leaves Maternity leave 90 days Wedding or wedding of natural children: leave 3 days Funeral leave on death of family member 3 days	Other Special Event Paid Leaves Maternity leave 60 days Death of a family member, up to 15 days Study leave 3 years with full pay Special leave: one month at a time up to 12 months during entire employment period
Unpaid leave Those who take leave for more than one month are not entitled to receive salaries	Unpaid Leave Extraordinary leave 15 days at one time up to 6 months in case of extraordinary situation

- 17 KUKL internal work processes have not been standardized or defined and there are no standard manual of procedures. The responsibilities of the departments or divisions or branch offices or other organizational units, chief of these organizational units, and reporting requirements to the supervising units and monitoring responsibilities of the supervising units have not been spelled out.
- 18 The main mode of internal reporting is informal. Informal communications takes place daily among the top management; and other operational staff from branch offices or offices beyond the central office in an adhoc manner to deal with specific issues that have arisen and needs urgent attention. The mode of communication is that similar to crisis management or firefighting. However, the approval process is formal and well documented.
- 19 Five unions are active in KUKL officially. These unions are affiliated to five major political parties. KUKL has not been able to hold election for employees union for some years to elect the official union of the company. The unions are powerful because of their patronage of major political parties. The unions frequently interfere in staff management to fulfill their political interests. KUKL management does not find free hand in staff related issues and faces great problem in staff management.

Technical

- 20 KUKL is required to prepare plans, programs, policies and strategies for improvement of various aspects of water supply services and implement them to improve water supply services in KV as required under the license and asset lease provisions. These plans include Water Sources and Treatment Plant Plan, Energy Management Plan, Emergency Response Plan, Community Tap Improvement Plan, Tanker Service Plan, Low Income Priority Area Plan. The programs would include Water Quality Sampling and Testing Program, Maintenance Management Program, and Public Information Program. But KUKL has not adopted any of these plans though draft plans have been prepared by CBP Team. The absence of plans and program on main activities of KUKL has left it with no direction to achieve improvement in its services. The planning division is poorly staffed and without its head.

Financial

- 21 The last tariff revision took place with effect from July 16, 2013. The tariff was raised by about 82% for all categories of consumers including domestic, non domestic, big consumers and tanker service. The impact of tariff on revenue was however only about 63% which is about 19% less than expected.

- 22 The financial situation of KUKL has improved slightly after the revision of tariff in 2013. The operating ratio of the utility has reduced from 0.984 in 2012/13 to 0.865 in 2013/14. KUKL has made an operating profit of Rs.78.89 million in 2013/14 after incurring huge losses for many years. In 2014/15, KUKL has projected that the company will make an income of Rs.908.65 million and will make total expenditure of NRs 920.74 incurring a loss of Rs. 12.09 million excluding depreciation amount.
- 23 The above figures do not show the actual cash flow situation of KUKL. KUKL has a collection ratio of about 70% only. So the cash flow is not sufficient to meet operational requirement and cash crunch is very serious. In 2013/14, the cash deficit to meet operating expenditure was Rs 182.9 million which is projected to reduce to Rs 155.5 million in 2014/15.
- 24 The account receivable is high and is increasing every year. The account receivable in 2013/14 is NRs 1,042 million which is 14.97 months revenue and shows very poor performance. The collection efficiency is about 70% and the arrear is increasing every year.

Communication and Reporting System

- 25 KUKL has legal obligations to report to KVWSMB and WSTFC as provisioned in license and lease agreement. The reports included quarterly and annual operating report, annual financial report and audited financial report and annual report on the condition and operation of the service system. But KUKL is not preparing these operating and financial reports and submitting to KVWSMB and WSTFC as required.
- 26 There is no formal system of progress reporting inside KUKL except for the capital investment project which needs reporting to the Ministry of Urban Development (MOUD) and the National Planning Commission (NPC). The informal reporting systems are not effective in monitoring.

Post Melamchi Scenario

- 27 The water supply scenario post Melamchi in year 2017 however does not look encouraging based on the analysis of design principles used. The design has assumed that all areas within ring road and adjoining areas will be supplied exclusively by Melamchi water and existing sources will be used for areas upstream of reservoirs. The assumption may hold good for 2025 scenario when there will be additional water from Yangri and Larke sources but for year 2017 scenario, this may present a scarcity situation. The total quantity of treated water available from Melamchi in 2017 will be 85 mld as the capacity of WTP is 85 mld only. This is less than the quantity of water supplied at present from existing sources in wet season and therefore will be insufficient to meet the demand and so, the improvement in supply may be unlikely without the use of existing sources.
- 28 There are no plans and strategy on how to change the supply from the existing system to the new network system constructed under Melamchi project.

The Way Forward

Organizational and Administrative Issues

- 29 The KUKL Board should formulate a policy and a code of conduct. KUKL board policy and code of conduct should be prepared in line with the identified strategic objectives of the company. The second important step is to establish an executive leadership, by appointment of General Manager with performance contract. The third important step is to finalize the restructuring of organization structure and define responsibilities, supervision and reporting requirements for department, divisions, and branch offices under Operations Departments, Engineering Department and Administration and Finance Department.

- 30 The restructuring of present KUKL organization has been proposed on a functional basis considering the assets to be managed after completion of the Melamchi Project.
- 31 The total staff required for KUKL based on proposed organization has been estimated to be 1189. The total staff will consist of 493 technical staff, 479 Administrative staff and 217 unskilled staff. The proposed total staffing is less than the approved list of staff of KUKL by 16. However there has been shift in composition of support staff with reduction in administrative staff and increase in technical staff especially in level 3, 4 and 5. The biggest change in staff category is in level 3 where the number of administrative staff is proposed to be slashed by 56 and the technical staff increased by 58.
- 32 KUKL has the option of recruiting the top level managers from the open market on contract basis and or by promoting the qualified existing staff at the lower level. But the new managers should be amenable to the new style of corporate management and be performance based. So the proposal has been made to recruit at least 50% of total positions of level 11, 10 and 9 managers from the market on contract basis with the remaining may be filled up by internal promotion.
- 33 The recruitment of Engineers and Overseers should be a priority for recruitment by open competition from the market. A carefully prepared job description is a pre requisite for starting recruitment process. The old pending recruitment process in KUKL should be scrapped.
- 34 The separation of production and commercial management at division level has been proposed after the commissioning of Melamchi project; and the separation of these production and commercial management function at branch office level has been proposed currently as a transitional arrangement so that the full separation could be done easily at a later stage.
- 35 The existing boundary of branch offices may not be appropriate after the bulk distribution and the new distribution network of Melamchi Project comes into operation. But the change of boundaries before the commissioning of Melamchi system may create more disturbances, because the present water supply system does not support DMA configuration proposed for post Melamchi period.
- 36 The current KUKL staff regulations are based more on controlling perspective rather than from a motivating perspective. It is necessary to establish new regulations reflecting the mission and strategic objectives of the company. Based on the study of the staff regulation of PPWSA and the local environment in Nepal, some areas have been identified in KUKL regulation for revision which may need to be amended on a priority basis, to help in developing conducive environment for developing good work culture in KUKL.
- 37 A change management team of senior managers led by General Manager has been proposed to execute a complex operation consisting of; a) information dissemination on intended change and objectives of the change; b) change promotion through active and visible participation; c) development of training requirements based on the skills, knowledge and behaviors and d) resistance management as a prelude to capacity building program.
- 38 The twining arrangement with PPWSA is expected to provide cost-effective capacity building of KUKL in delivering continuous improvements in its service. The twining arrangement will cover addressing core business fields of KUKL like sustainable operation and maintenance, and management of the assets.

Monitoring and Reporting

- 39 It is anticipated that MIS reporting on daily basis will be established initially with as much as possible data on the functioning of daily water supply operations and extent of adherence to water supply schedule by email, in every morning and evening, to see what was accomplished every day by the branch offices.

- 40 KUKL needs to comply with reporting requirements to KVWSMB and WSTFC. It is expected that KUKL will establish the operational reporting system immediately on completion of staff recruitment and deployment of staff at critical positions.
- 41 A Coordination Committee is proposed under the chairmanship of KVWSMB, as the owner of assets, to monitor and coordinate the activities of KUKL, PID and MWSDB. The committee will meet quarterly and discuss the progress of works in each agency and agree on remedial measures to be taken if delays in progress are reported.

Technical and Operational Issues

- 42 KUKL should form a management committee comprising of its top managers and this committee should review draft policy documents prepared by CBP team and earlier consultants and finalize it and recommend KUKL board for approval.
- 43 KUKL and PID should prepare a detailed water supply scenario for water supply situation in 2017 (post Melamchi) and make arrangements to ensure that available water could be supplied to the consumers in an efficient manner and people can take full benefit of it. It should also ensure that existing facilities are used to a maximum extent and the existing tubewells and WTPs are not abandoned.
- 44 Melamchi Project has proposed complete renewal of distribution network and is installing a new distribution network not connected to existing system. The existing system is proposed to be abandoned after the project. But the transfer from old system to new system will be a great challenge. KUKL and PID should coordinate and prepare a strategy for operational change over from existing system to the new system.
- 45 The training of operators for operation of Melamchi Project including water treatment plant, intake and tunnel should start from construction phase itself when the controlling and operational instrumentations are being installed in order to ensure that the operator has full knowledge about the system. So MWSDB and KUKL should coordinate to have the prospective operational staff from KUKL to be deputed to the project for training in time.

Areas of Improvement for Financial Strengthening

- 46 KUKL is a commercial company and its survival is based on financial sustainability. The strategy of KUKL should be to sell more water at volumetric rate to consumers consuming more than minimum quantity. The provision of new connections to new customers will reduce the average consumption further and reduce revenue instead of increasing. In this situation of supply, the tariff strategy should focus on the reduction of minimum consumption from present 10m³ to say 8 m³ for minimum charge without raising the tariff rate. This would have significant impact on revenue increase by converting some of the used amount to volumetric tariff band of Rs 32 per cum from the minimum band of Rs 10 per cum.
- 47 KUKL should produce maximum water from existing water sources as the additional cost required for water treatment and distribution will be minimal. The existing water sources have high flows during wet season; KUKL should tap maximum water for supply. KUKL should not constrain itself from using pumping during dry season and the operating budget for electricity should not be a constraint for operating pumps for water production. Pharping water supply system may be one example where the more water could be supplied during wet season by operating pumps in wet season.
- 48 The operation and maintenance cost of isolated tubewells and water treatment plants directly connected to distribution system is very high in term of water produced per unit volume. This is due to limited use of the facility during supply hour only. As these plants are expected to be not used regular

supply after the completion of Melamchi project, the construction of these isolated facilities in new places should be decided with due consideration for possible future uses.

- 49 An Action Plan with timeframe has been prepared for Institutional Capacity Development of KUKL

Conclusions

- 50 The present management capacity of KUKL is very low with more less than 50% of top management positions lying vacant. The General Manager has not been appointed for a very long period. It is in dire need of leadership and the recruitment of General Manager and the management team is very urgent.
- 51 The lack of technical manpower at supporting level is a major problem facing KUKL. The water facilities lacked operators for operating WTPs, pump stations, tubewells etc. So the staff requirement as reassessed during the study needs to be recruited for smooth and efficient operations of plants.
- 52 One of the main problems in water supply sector has been lack of monitoring. KUKL has not issued job description to its staff for it to monitor and evaluate the performance of the staff. This lack of monitoring and performance evaluation has led to a culture of non performance.
- 53 The institutional arrangement has placed monitoring responsibility on KVWSMB and WSTFC. But these agencies have started monitoring just recently. There is no action taken against KUKL for non-compliance of legal requirements. As a result there is lack of commitment to meet the performance requirement.
- 54 The coordination between KUKL, PID and MWSDDB is crucial for improvement of water supply situation, especially for the post Melamchi period. The lack of coordination may result in great problem in commissioning and operation and maintenance of the facilities and may result in little change in the service standard provided to the consumers.
- 55 KUKL License is not a static document which cannot be changed. KVWSMB, as the owner of assets and the issuer of license, should take initiative to amend the license and asset lease agreement so that all issues including non-compliance issues, punitive issues and financial issues (Lease Fee) could be addressed properly.

1. INTRODUCTION

1.1 Background

- 1 Kathmandu Valley is the most rapidly growing urban area in Nepal. The population growth in the valley has been quite rapid during last few decades and has increased from 0.41 million in 1952 to about 3.2 million in 2015 (2.51 million in 2011). The population growth rate in last decade was 4.3 % per annum with about 6% growth rate in urban areas and 2.3% in rural areas. The water supply facilities development has however not been able to keep in pace with the population growth. As a result, the water supply shortage has remained as a perennial problem. In order to address perennial water shortage situation and to improve the water supply services in the valley, GON embarked on a two pronged improvement strategy in early 2000 that included institutional reforms and capital investment for infrastructure development including transfer of water from Melamchi valley to Kathmandu valley.
- 2 The infrastructure development projects are currently under implementation to bring 170 mld additional water supply to Kathmandu Valley and to lay a massive network of bulk distribution mains and distribution network covering KUKL service area with the support of the Asian Development Bank (ADB), Japan International Development Cooperation (JICA) and Organization of Petroleum Exporting Countries (OPEC). These works are expected to be completed within the next 1.5- 2 years.
- 3 On the institutional reform side, the government amended relevant laws and enacted new laws for Kathmandu water supply sector reform and completed institutional reform program in 2008 with the separation of responsibilities and formation of Kathmandu Valley Water Supply Management Board as asset owner, Water Supply Tariff Fixation Commission as economic regulator and Kathmandu Upatyaka Khanepani Limited as utility operator responsible for operation of water supply and sewerage service in Kathmandu Valley. KUKL took over the responsibility of managing water supply and sewerage services in Kathmandu Valley from 13 February 2008.
- 4 After the lapse of seven years since KUKL took over management of Kathmandu Valley water services, the water supply service is still faced with problems and the service level has further deteriorated. Most areas in the valley receive water for about 1-3 hours every 3-5 days in the wet season which reduces to about 1-2 hours every 5-10 days during the dry season. The water quality is not reliable and often contaminated with pollutants. The water treatment plants are in need of refurbishment and are in short of operating manpower. The non revenue water is high and is estimated by KUKL at 35-40%. The revenue collection ratio is about 70% and the total accumulated arrears stands at NPR 1.032 billion. The consumer complaint on quality of service is high.
- 5 KUKL is faced with great shortage of managerial and technical manpower. It is planning to recruit all necessary managerial staff for conducting its business effectively. It has started the process of recruiting General Manager from open competition. The recruitment process is expected to be completed very soon. KUKL is facing acute shortage of technical manpower to operate and maintain its existing facilities and so planning to recruit necessary technical staff in near future and deploy them to required facilities within 2-3 months.
- 6 The large infrastructure development projects are also moving towards completion stage and KUKL is required to manage operation and maintenance of all these additional facilities also. The new facilities will require more advanced skill for its operation and maintenance. KUKL needs to enhance its capability and be prepared to handle these new additional responsibilities.

- 7 In this context, it is felt necessary to conduct institutional and technical capacity assessment of KUKL. This activity will support to develop a concept for management and administrative capabilities of KUKL and enable KUKL to carry out its activities in a more efficient and effective manner in both pre and post Melamchi scenarios. The present study is the result of this felt need to conduct institutional capacity assessment of KUKL.

1.2 Objective of the Study

- 8 The objective of the assignment is to analyze internal institutional capacity (managerial and administrative) as well as its functionality in KUKL including organization chart, staff deployment, administrative chains, responsibilities of each post, existing documents for staff regulation, job descriptions and routine work of staff of KUKL, financial status and constraints, technical problems related to institutional issues and works to be done for the improvement and make recommendation for functional improvement of KUKL for future. The output of the assignment will include:
 - a) Identification of current situation and problems in KUKL in terms of internal factor as organization chart, deployment of staff, administrative system and documentation
 - b) Recommendations on necessary action to improve the current functional situation of KUKL, encompassing ; i) Appropriate structures of administrative process; ii) Crucial points to improve administrative rules and regulations of KUKL such as staff regulations and job descriptions; iii) Efficient manpower deployment plan for effective utilization of assets for water supply and, iv) KUKL financial status and areas for its improvement.
 - c) Implementation Plan with necessary priority actions for institutional capacity development of short as well as medium term needs of KUKL.

1.3 Scope of work (Specific Tasks)

- 9 The scope of work included following activities:
 - a) Conduct desk review of existing documents including all relevant documents prepared by capacity-building and public-private partnership support team (the CBP team)
 - b) Carryout interview with related officials in KUKL, and other stakeholders, Development Partners as necessary and collect documents on KUKL
 - c) Collect information and documents related to internal institutional issues of KUKL including staff regulation, job description and other necessary document
 - d) Analyze information collected from KUKL on internal institutional issues and identify current situation and problems including existing organization chart, deployment of manpower as well as the efficiency as internal factors of institutional capacity of KUKL.
 - e) Study and analyze the result of foreign country visit by KUKL management staff, such as Cambodia and Vietnam.
 - f) Prepare workable, efficient organization structure including numbers of staffs for different discipline, considering post Melamchi Water supply scenario
 - g) Prepare information flow sheet inside the KUKL organization and with other related organizations PID, KVWSMB, WSTFC and MoUD
 - h) Collect data on financial situation of KUKL and make preliminary assessment of financial status of KUKL and identify areas for improvement of its financial health.
 - i) Prepare recommendations for improvement of institutional capacity as well as administrative procedure & documents of KUKL.
 - j) Prepare a detailed implementation plan with necessary priority actions for institutional capacity development to address KUKL functioning in short as well as midterm
 - k) Prepare draft final report consolidating all above.
 - l) Assist in organizing workshop to disseminate study findings and discuss with key stake holders to obtain agreement on institutional capacity development of KUKL
 - m) Prepare final report incorporating comments from all stakeholders.

1.4 Study Methodology

- 10 The study has been conducted by collecting some primary and mostly secondary data and information from KUKL and other agencies including KVWSMB, PID, WSTFC and MWSDP. The Consultant reviewed all the reports prepared by CBP team and discussed with KUKL management about the implementation status of these policy documents.
- 11 The study team also collected and reviewed existing organization structure of KUKL, its staff regulation, KUKL company shareholder agreement, Memorandum of Understanding and Article of Association and interacted with KUKL management and KVWSMB about present problems and deficiencies. The team also collected relevant document and information from KVWSMB, PID, MWSDP and WSTFC and analysed the data and the information so collected. The list of documents collected and reviewed by the team has been presented in Annex 1.
- 12 The study team also visited Maharajgunj Branch office, Tripureshwar office, Bansbari WTP, Shivapuri water sources, Bansbari well field tubewells to appraise about the status of branch offices and water works operation, and interacted with the staff on various aspects of operation and maintenance.
- 13 The study team also interviewed and interacted with the management and staff of KUKL including officials of Administration Division, Finance Division, and Technical Division to collect data and information on problems faced by the divisions. The team also interacted with MOUD, KVWSMB, PID, WSTFC and MWSDP officials to appraise about the implementation status of infrastructure development projects and the operation and maintenance arrangement provisioned in the construction contract and their perception about appropriate O&M arrangement. The team also interacted with the Institutional Framework Assessment study team and coordinated with them.
- 14 The study team also discussed with the members of the task force committee consisting of MoUD, KVWSMB, MWSDP, KUKL WSTFC and JICA and worked under their overall guidance.

1.5 Limitations of the Study

- 15 The KUKL services in Kathmandu Valley cover water supply and sewerage services. But the scope of this study is limited to analysis of institutional capacity and functionality of water supply services sector only, excluding that for sewerage.
- 16 The study is also limited to organization structure of KUKL and does not cover organization structure of PID which is functioning independently of KUKL though is under the KUKL board. The study however looks at the linkage between KUKL and PID and the information flow between them.
- 17 The study is limited to the internal institutional problems and issues inside KUKL. The team understands that the Institutional Framework Assessment study is being conducted by another team of consultants and all issues relating to institutional frame work are included in their terms of reference.

1.6 Study Team

- 18 The study team comprised of two professionals, Mr. Noor Kumar Tamrakar and Mr. Krishna Chandra Manandhar for a total input of 3 person months. The assignment is supervised by the Water Policy Advisor of JICA, Mr. Ryuji Ogata.

2. WATER SUPPLY SERVICE IN KATHMANDU VALLEY

2.1 Present Water Supply Situation

- 19 The service area of KUKL water supply system in Kathmandu Valley covers five municipalities, Kathmandu, Lalitpur, Bhaktapur, Madhyapur and Kirtipur and parts of 15 adjoining recently formed municipalities within Kathmandu Valley and 3 Village Development Committees (VDC). Fig 1 presents the KUKL service area boundary.

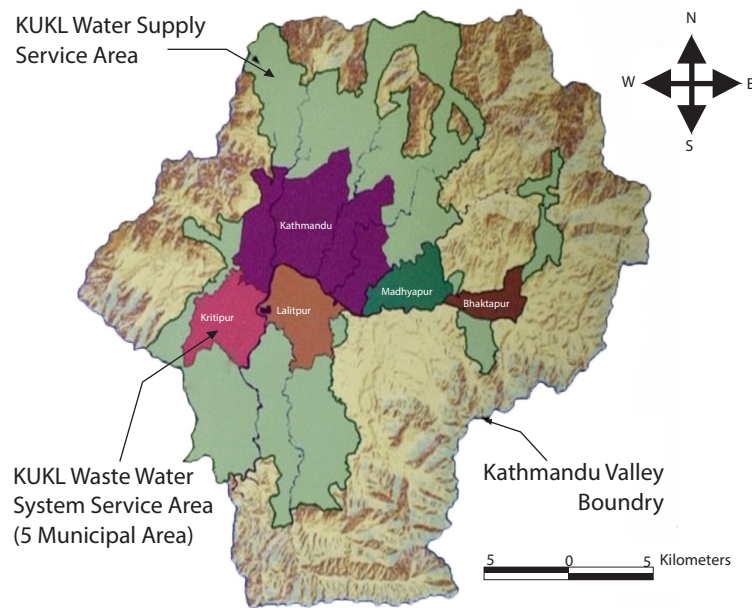


Fig 1: Map Showing Service Area of KUKL

- 20 The present population of KUKL service area is estimated to be 2.56 million and 90% of this population is served by KUKL. KUKL estimate of water demand in its service area in Kathmandu Valley is 370 mld while its supply is limited to about 144 mld in wet season and about 86 mld in dry season. There is thus a large disparity between demand and the supply. With the service population of about 2.30 million and the unaccounted for water of about 40%, the water availability per capita is only about 38 lpcd in wet season and about 22 lpcd in dry season which is lower than the basic water supply requirement of GON.
- 21 In this acute shortage situation also, KUKL is continuing to distribute new connections. KUKL makes about 5,000 new connections every year which draws water from already water scarce system. The new valves are installed to further divide the service area and supply additional customers.
- 22 Under these water shortage conditions, KUKL is adopting a rationing system whereby water is allowed to flow to different sections of the service area in rotation. The control system developed is complex and requires KUKL staff to open and close over 1,021 valves. Despite these measures, there is still inequitable distribution of water. While some consumers near transmission mains have an abundance of water and enjoy 24-hour supply, a large share of the population only receives water for about 1-3 hour every 5 days in wet season and 1-2 hour every 10 days in dry season. This is expected to deteriorate further in coming years until additional water become available.

- 23 The pressure of supply is low and consumers usually resort to direct pumping to suck water from the pipe. This further disturbs the functioning of the network.
- 24 KUKL has not been able to control the leakage in the system. The unaccounted-for water in the system is estimated to be about 40%. The water supplied to the customer is often polluted due to ingression of contaminated water.
- 25 KUKL uses 265 staff/valve operators to operate more than 1,021 valves in Kathmandu Valley. This number of valve operators constitutes about 22% of the total employees of KUKL and constitute main work force of the utility.

2.1.1 Water Production and Sources

26 The main sources of water used for water supply in Kathmandu valley are surface and groundwater sources. The total water production from both these sources in Kathmandu Valley is about 144 mld in wet season and 86 mld in dry season with an annual average production of about 116 mld. The supply is predominantly from surface sources in the wet season but is complemented by groundwater sources in the dry season. The water production volume has remained almost constant during last 6 years since the establishment of KUKL despite many water augmentation programs being implemented. Fig 2 presents the average daily water production volume, maximum during wet season and minimum during dry season for last six years.

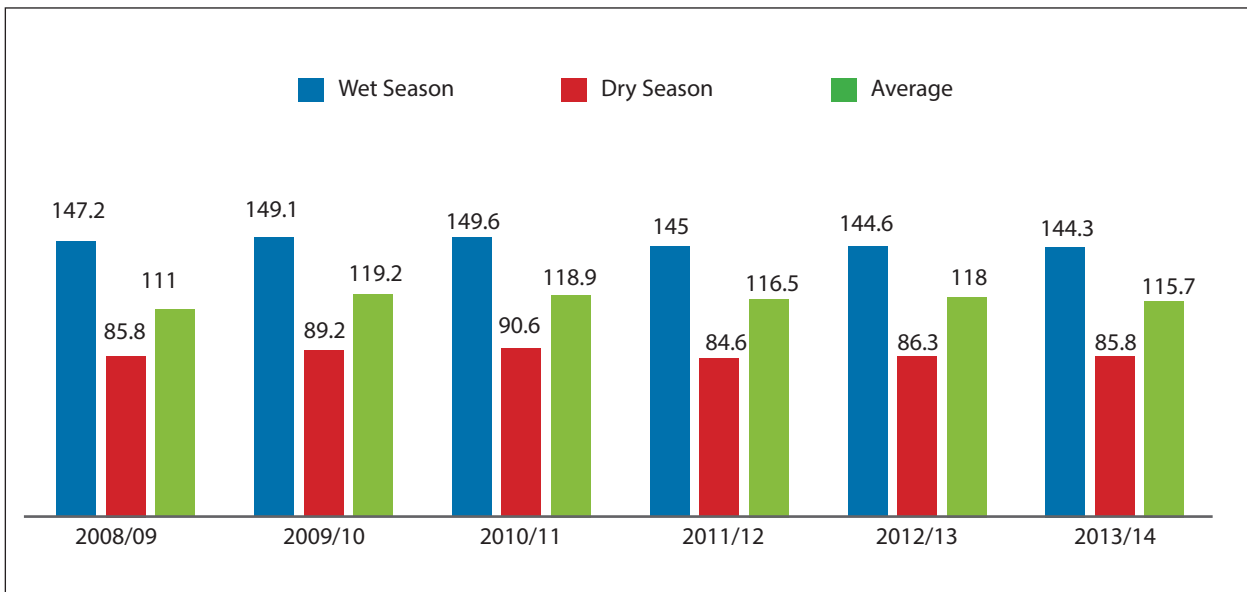


Fig 2: Water Production in last 6 years

Surface Water Sources

- 27 The surface water sources constitute main source of water used for water supply in Kathmandu valley. The total number of surface water sources tapped by KUKL within Kathmandu Valley is 35 including 18 spring sources. They are mostly located in foothills of Shivapuri and Chandagiri watershed area and other locations scattered throughout the valley. The flow in these sources has seasonal variation with maximum flow during the monsoon season and low/minimum flow during dry season from December to May.
- 28 Though the availability of water in these surface sources during wet season is very high, KUKL can tap only about 130-140 mld due to limited capacity of its intake and conveyance network system. In the dry season the flow diminishes and the total available water is reduced to about 60-70 mld.

- 29 The surface sources include many small sources which has small but reliable discharge. All these small sources also need almost similar manpower for protection and operation. So the manpower required per unit of water production is much higher for small sources.

Groundwater Sources

- 30 KUKL has been extracting groundwater through deep tubewells to supplement flow from surface sources especially during the dry season. There are 83 deep tube wells owned by KUKL within Kathmandu Valley. Out of these, only 59 deep tube-wells are in operating condition. Annex 2 presents the list of surface water sources and the tubewells of KUKL.
- 31 The average daily production of water from KUKL tube wells is in the range of 20 – 30 MLD during dry season when the maximum numbers of tubewells are operated. The average discharge from these tubewells is only about 0.5 mld as many of these tubewells are operated for limited hours only. Though most of tube wells have originally been designed to discharge water to one of the major water treatment plants, majority of them have now been used for local supply directly. Out of 59 tube wells currently in operation, only 22 tube wells are discharging water to service reservoirs/WTPs.
- 32 The tubewells discharging directly into the distribution system are not used to its full potential production capacity but are operated for limited hours only, usually for a maximum of 8-12 hours. The tubewells are operated during supply hours only due to non availability of storage reservoir.
- 33 KUKL frequently faces shortage of manpower to operate all tubewells at one time. It has been finding difficult to allocate pump operators for operation of all tube wells. As such, it has not been able to use all tube wells efficiently. The operators are mostly daily wages staff without any prior training or knowledge about operation of pumps and electrical equipments. The breakdown of tubewells is frequent. The great Earthquake of 25 April 2015 has changed the characteristics of some tubewells but its long term effect is still not known.

Water Treatment Plant

- 34 There are 26 existing water treatment plants in Kathmandu Valley water supply system with 20 WTP's in operating condition with a total treatment capacity of about 117 MLD. Out of these 26 plants, 6 WTPs are of comparatively larger size (>10 MLD treatment capacity) treating water from surface source only or from both surface and groundwater source and the rest are mostly smaller size facilities. Most small WTPs are for treatment of groundwater and are attached to individual tube wells located at various places in Kathmandu Valley.
- 35 The water testing laboratories in WTPs are non functional due to lack of manpower and the treatment chemicals are added without testing and based on observation and experience. The regular repair and maintenance is lacking in all treatment plants. This is attributed to lack of manpower, lack of spare parts and repair materials and lack of adequate budget.
- 36 KUKL does not use Standard Operation Procedures (SOP) for water treatment plants and other water works. The SOP prepared by CBP Team has not been effective. Though Operation & Maintenance Manuals are available for three major water treatment plants constructed with Japanese Government cooperation, the procedures are not being followed.

2.1.2 Water Distribution System

- 37 According to KUKL records, there are about 1,596 km water supply pipeline in Kathmandu Valley. Out of this, 1,282 km pipeline are distribution mains and the remaining 314 km are transmission mains. The pipes are of various materials including Cast Iron (CI), Ductile Iron (DI), Steel, Galvanized iron (GI), High Density Polyethylene (HDPE) and PVC. The size of pipe varies from 800 mm to 50 mm in diameter.

- 38 The existing distribution network is very complex as it has developed in an adhoc manner during last two decades due to absence of any major distribution network extension program during the period. Most of trunk mains have been also used for making service connections.
- 39 KUKL is distributing water to its consumers through about 194,718 connections including 179,739 metered, 13,783 unmetered and 1,196 public stand posts. In the area upstream of service reservoir, KUKL is distributing water directly through transmission mains. These consumers mostly receive water for 24 hours a day. Table 1 presents the branch-wise distribution of water connections in Kathmandu Valley.

Table 1: Water Connections in Branches

S.N.	Branch	Metered	Unmetered	Stand Post	Total
1	Mahankalchaur	27,292	3,910	137	31,339
2	Maharagunj	29,864	1,167	173	31,209
3	Baneshwor	24,943	821	32	25,796
4	Kamaladi	5,676	244	20	5,940
5	Chhetrapati	12,241	1,473	180	13,894
6	Tripureshwor	18,810	1,819	137	20,766
7	Bhaktapur	9,936	357	203	10,496
8	Madhyapur Thimi	7,955	7	0	7,962
9	Lalitpur	35,443	3,935	314	39,692
10	Kirtipur	7,579	50	0	7,629
	Total	179,739	13,783	1,196	194,718

Source: KUKL Annual Report, Feb. 2015

2.2 Ongoing Infrastructure Development Projects

- 40 A large infrastructure development project (Melamchi Project) is under implementation to improve infrastructure facilities in Kathmandu Valley with the aim of addition of 170 mld supply through a 27.5 km tunnel inter basin transfer project and construction of a 85 mld water treatment plant. The project also includes construction of a network of 75 km large size bulk transmission mains and 670 km of distribution mains in addition to a large network of distribution network covering main urban areas in Kathmandu and Lalitpur municipalities. The completion of these projects is expected to significantly improve the water supply situation in Kathmandu Valley. The status of implementation of various components of the project is as follows.

2.2.1 Melamchi Water Supply Diversion Project

- 41 Melamchi Water Supply Diversion Subproject is under implementation by Melamchi Water Supply Development Board. There are two components of this subproject; a) construction of intake structures and tunnel from Melamchi to Sundarijal in Kathmandu Valley and b) construction of water treatment plant.
- 42 The construction of tunnel under Melamchi Diversion Subproject with the assistance from ADB (Loan 1820) started from 2009 and about 12.84 km of tunnels has been constructed till June 30 2015. The tunnel is expected for completion by mid 2016 as per the contract. But the delay is likely as more than 53% of tunnel is yet to be constructed. At the present rate of construction, the tunnel completion may be expected by early 2018 unless measures are taken to expedite the present pace of construction.
- 43 The other component of Melamchi Diversion Subproject is the construction of water treatment plant near Mahankal in Sundarijal. JICA is assisting GON in funding this component of the project. An 85

mld capacity water treatment plant with provision for expansion to 510 mld is under construction at Sundarijal near tunnel outlet. The WTP has been designed with SCADA (PLC) facilities for operation of the plant. The construction of plant is planned for completion in March 2016. However some delay is also expected in this component.

2.2.2 Kathmandu Valley Water Supply and Sanitation Project

- 44 The second subproject of Melamchi Project is Kathmandu Valley Subproject which comprised of works for improvement of water supply infrastructure in Kathmandu Valley including distribution network improvement, bulk distribution system, valley source augmentation, tube well construction and maintenance support to KUKL and is under implementation by Project Implementation Directorate (PID) of KUKL. The project has already completed implementation of demonstration/pilot projects for distribution network improvement in Min Bhawan, Kalo Pool in Kathmandu and Kusunti area in Lalitpur. It has also completed some immediate works for source augmentation and has been supporting KUKL capacity building by providing goods/material support for operation and maintenance of the system. The laying of bulk distribution system and distribution network system is still ongoing. The project has, however not been able to bring the completed DNI systems into operation.

2.2.3 Kathmandu Valley Water Supply Improvement Project

- 45 KUKL PID is also implementing Kathmandu Valley Water Supply Improvement Project: Loan 2776 which is also financed by ADB. The total estimated cost of the project is US\$ 130 million. The project started in year 2011 and is expected to be completed by 2016. The project focuses on infrastructure development for distribution of water from Melamchi water treatment plant to consumers, and improvement of efficiency and service delivery. The major works of the project include distribution network improvement by rehabilitation and expansion of existing water supply system, construction of bulk distribution system (bulk pipeline and service reservoirs) and support for operational and financial improvements and capacity building including major repair and rehabilitation of existing water supply facilities.
- 46 In the new design of distribution network, the service area has been divided into different Distribution Network Improvement (DNI) zones. These zones have been sub-divided into various District Metering Areas (DMAs) for ease of isolating the area from the total network for operation and maintenance and leakage management purposes. Each DMA has been supplied by one main pipeline and no other linkages have been provided with other DMAs. As these DMAs do not follow the existing boundary of existing branches, there will be a need for re-demarcation of boundary of branch offices when the new DNI system comes into operation.
- 47 The project proposes to replace all existing pipelines and construct a new system and has been laying main and distribution pipelines.

2.2.4 Additional Financing of Kathmandu Valley Water Supply Improvement Project

- 48 The ADB has recently agreed to provide additional funding for implementation of additional works for improvement of water supply in Kathmandu Valley. The additional financing will provide funds for construction of remaining bulk distribution and distribution network improvement works in Kathmandu Valley covering Kirtipur, Madhyapur and Bhaktapur municipalities, capacity expansion of water treatment plant at Sundarijal to 170 mld, detailed design of Phase II of Melamchi Project to bring additional water from Yangri and Larke river, repair and rehabilitation of existing works for enhancing capacity of Branch offices of KUKL and support KUKL in non-revenue water management.
- 49 The loan negotiation for additional financing has been completed in May 2015.

3. INSTITUTIONS RESPONSIBLE FOR WATER SUPPLY SERVICES IN KATHMANDU VALLEY

50 The institutions responsible for water supply services in Kathmandu Valley are as follows.

3.1 Ministry of Urban Development

51 Ministry of Urban Development (MOUD) is the ministry responsible for policy, planning and provision of water supply and sanitation services to the urban and rural areas in Nepal. It is the line ministry of all other agencies responsible for water supply in Kathmandu Valley.

3.2 Kathmandu Valley Water Supply Management Board

52 Kathmandu Valley Water Supply Management Board is a public statutory entity which has been established under the Water Supply Management Board (WSMB) Act 2063 with an objective of providing water supply and sanitation services to urban areas and adjoining rural areas of Kathmandu Valley in an organized, effective and regular manner.

53 KVWSMB is solely responsible for providing water supply and sewerage services. KVWSMB owns all the assets associated with water supply and sewerage services in Kathmandu Valley and is responsible for developing and overseeing service policies, preparing development plans and managing financial resources.

54 The executive committee of KVWSMB consists of 11 members including 5 mayors of KV municipalities and one representative each from MoUD, Consumers, NGOs, Federation of Nepalese Chambers of Commerce and Industry (FNCCI), District Development Committee (DDC) and a water sector expert.

55 The WSMB Act has restricted KVWSMB from operating the service by itself and requires it to operate through a service utility operator. In line with this provision, KVWSMB has issued operating license to KUKL for operation and management of water supply and sanitation services in Kathmandu Valley and have entered into asset lease agreement enabling KUKL to use the assets for providing water supply and sewerage services.

56 KVWSMB is required to conduct monitoring of performance of KUKL to ensure that KUKL provide services as per requirements of the terms of the license.

3.3 Water Supply Tariff Fixation Commission

57 Water Supply Tariff Fixation Commission is an independent regulatory commission established in 2007 under WSTFC Act (2006) as part of sector reform program for economic regulation of water supply and sewerage services. It is also responsible for ensuring quality standards in services delivery and acts as an ombudsman in resolving disputes between the service provider and the consumers. WSTFC is responsible for setting the tariff for water supply and sewerage services in Kathmandu Valley on submission of application from KUKL with recommendation of KVWSMB.

58 WSTFC has approved tariff revision for water supply and sewerage services in Kathmandu Valley by about 82% in July 2013 and has set nine conditions to be met by KUKL after the implementation of revised tariff.

3.4 Kathmandu Upatyaka Khanepani Limited

- 59 Kathmandu Upatyaka Khanepani Limited (KUKL) was established in 2007 as the water utility operator for Kathmandu Valley, with the mandate for management of water supply and wastewater services for Kathmandu Valley. KUKL has been set up as public company following a Public Private Partnership (PPP) model under the Company Act, where a majority share of the company is owned by the municipalities (50%) and the Government (30%) and the remaining shares are owned by private sector representative bodies (15%) and the employees' trust (5%).
- 60 The objective of the company is to operate and manage the water supply and sanitation assets in Kathmandu valley and provide qualitative and reliable service to the consumers affordably and at reasonable tariff rate by operating the company professionally and commercially by involving private sector.
- 61 The authorized capital of company is Rs 450 million which is divided into 500,000 ordinary shares and 4 million preference shares of Rs 100 each. The paid up capital of the company is Rs 255 million only. The preference share has not been allotted yet.
- 62 KUKL board has two wings, one (Project Implementation Directorate (PID)) responsible for implementation of ADB financed infrastructure development projects and other (KUKL) responsible for operation and maintenance, commercial management and all other activities of the company.
- 63 KUKL had employed a Capacity Building and Public private Partnership Team (CBP Team) in late 2010 as part of the overall institutional reform program to support KUKL in operating Kathmandu Valley water supply and wastewater services in an efficient and financially and technically sustainable manner and capacitate KUKL staff to manage independently by the end of its 4 year contract period. The overall objective of CBP team was to strengthen KUKL's capacity and capability with respect to operation and management of water supply and wastewater services system and implementation of investment works to improve water supply networks and wastewater facilities in Kathmandu valley. The CBP team has completed their contract in June 2014 and has subsequently demobilized.
- 64 The CBP team has prepared various policy and planning documents including business plan necessary for establishing the basis of operation and streamlining the operations of the company in an organized manner towards establishing good corporate governance. Only few of these policy documents including the connection policy, business plan have been approved by KUKL board. Most of others reports are not approved by KUKL as these documents are regarded as incomplete documents and not implemented.
- 65 KUKL has received operating license from KVWSMB for operating the water supply and sewerage services in Kathmandu Valley in February 2008 and has been operating and managing these services since then. KUKL has also entered into a 30 year asset lease agreement with KVWSMB on the same day enabling KUKL to use for the assets for providing water supply and sewerage services.

3.4.1 KUKL License and Asset Lease Agreement

- 66 KUKL License is the main guiding legal document for management and operation and maintenance of water supply and sewerage services in Kathmandu Valley. As per the license, KUKL is fully responsible for operation and maintenance of existing water supply and sewerage system and in providing effective and efficient service to the consumers.
- 67 The main features of the license and asset lease agreement include;
- KUKL will operate the service to achieve regularity, continuity, equity and universality of supply;
 - KUKL will operate in a manner to achieve technical as well as financial and be responsive to needs of consumers and public health concerns;

- KUKL will impose and collect tariff for providing the service;
- KUKL will bear all the cost of operation and maintenance and management of services;
- KUKL will submit tariff revision proposals each year to WSTFC and implement new tariff with WSTFC's approval;
- KUKL will pay annual license and lease fee to KVWSMB;
- KUKL will have exclusive right to construct, extend, improve and rehabilitate the service assets on behalf of KVWSMB. KVWSMB will not directly construct, extend and improve or rehabilitate the service assets;
- KVWSMB shall be responsible for providing all capital investments;
- KUKL will meet the technical norms and be responsible to improve the service level to meet the standards as set out in the license
- KUKL Asset Lease will cover water abstraction, transmission and treatment infrastructure being constructed under the Melamchi Project when these facilities are completed, transferred to KVWSMB and commissioned.
- KVWSMB shall have the power to intervene in and terminate the license in case of serious and continuing failure to comply with technical norms and service standards.

3.4.2 Project Implementation Directorate

68 Project Implementation Directorate (PID) is a separate wing under KUKL board which has been set up as an independent project directorate for implementation of ADB financed infrastructure development projects by delineating it from KUKL's day to day business. PID is currently implementing infrastructural development projects under the financing of ADB loan and technical assistance. The leadership role of PID is given to the joint secretary level officer from the Ministry of Urban Development while other staff members are on deputation from the government and/or from KUKL based on project requirement.

3.5 Melamchi Water Supply Development Board

69 Melamchi Water Supply Development Board (MWSDB) is the government agency established by the Government of Nepal on November 9, 1998 for implementation of Melamchi Project, a mega project under implementation for easing the water shortage in Kathmandu valley on a long term basis. The primary objective of MWSDB is to implement Melamchi Diversion project in time and alleviate the chronic shortage of potable water in Kathmandu Valley.

70 MWSDB reports directly to the government and there is no direct relation with KVWSMB, agency responsible for water supply service in KV. The Melamchi Board will hand over the facilities constructed under the project to KVWSMB for ownership and operation and maintenance.

4. EXISTING SITUATIONAL ANALYSIS OF KUKL

4.1 Organizational and Administrative

4.1.1 KUKL Board of Directors

- 71 KUKL is governed by a non-executive board consisting of 9 members, 6 representing shareholders of the company and 3 independent directors. The number has been increased only recently from 7 to 9 with the addition of 1 director each from the largest shareholders, the Kathmandu Metropolitan City and the Government. The KUKL board now consists of 2 members each from the Government and the Kathmandu Metropolitan City, one each from Lalitpur Municipality and Nepal Chamber of Commerce and three independent directors including one nominated by ADB selected on the basis of professional and business experience.
- 72 The tenure of an independent board director is 2 years while there is no time limitation for shareholder nominated board members. The position of two independent directors is vacant at present and the board has initiated process for selection of two directors by open competition.
- 73 The composition of the board is in line with best practices around the world, where corporate culture is emerging continually integrating experience in building more independent and transparent boards, which have added value in management of water utilities.
- 74 The Board of Directors (BOD) has the authority to exercise all powers of the company and is responsible to comply with all duties of the company and operate, manage, supervise and control the business and activities of the company.
- 75 In order to fulfill other functions of the board in addition to general oversight of the KUKL management, KUKL board has three standing committees, namely (a) Project Steering Committee (b) Audit Committee and (c) Staff Recruitment Committee.
- 76 In recent months KUKL board has not been able to meet regularly to conduct its business due to conflict between the board members and the Chairperson on the issue of appointment of General Manager. Though the process for recruitment of General Manager by open competition was started about 8 months ago, the board has not been able to select and appoint a General Manager.
- 77 The board has delegated limited authority to the General Manager and frequently provides direction to the staff of divisions and lower levels of the company.
- 78 There is no TOR for the board members specifying their specific responsibility and accountability.

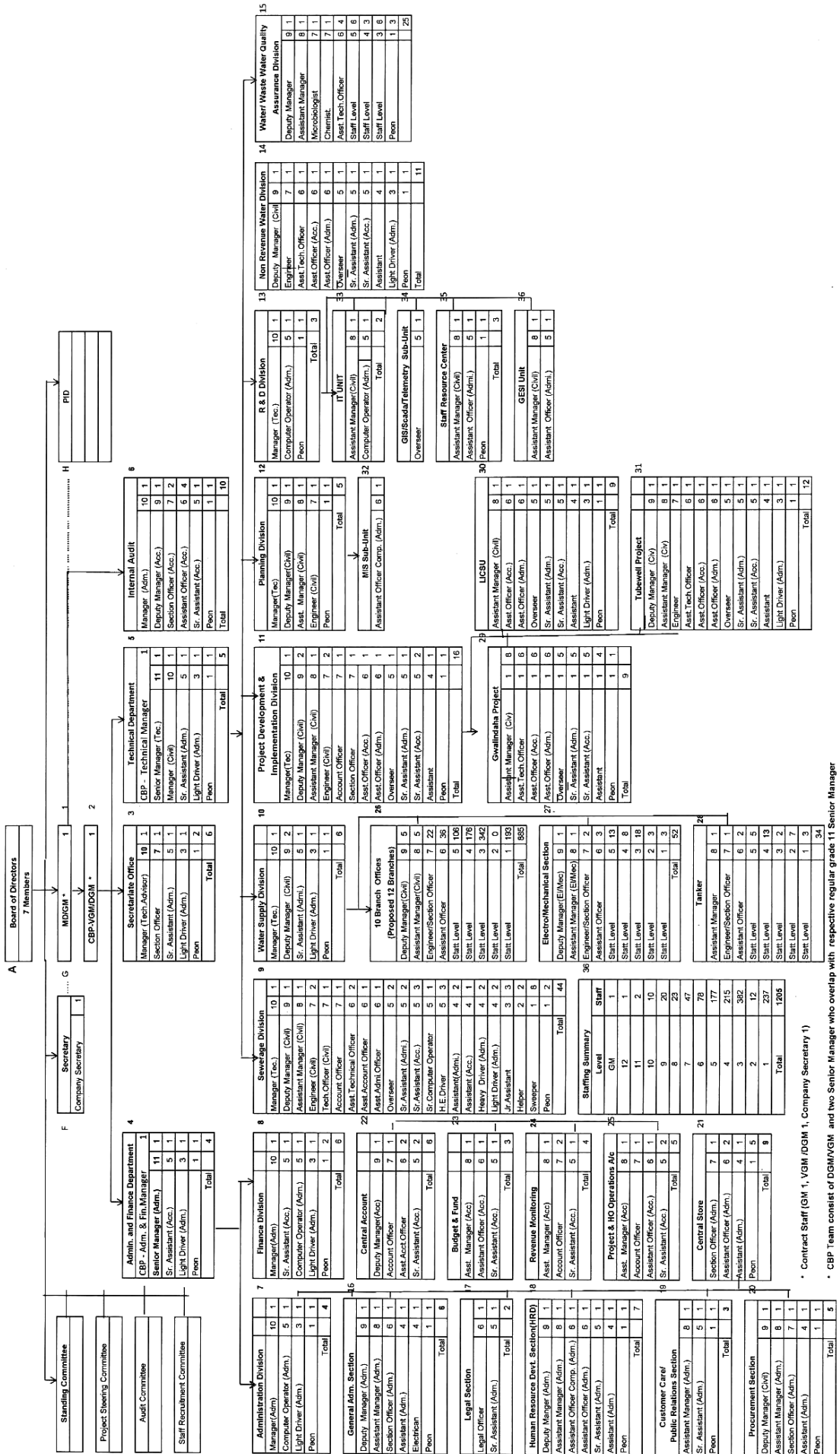
4.1.2 Present Organization Structure

- 79 The present organization structure of KUKL is presented in Fig 2.
- 80 The present organization structure consists of 3 main top managerial positions for the previous CBP expatriate team and has been formulated based on the provision that CBP team will support KUKL in the overall management. As CBP Team has now demobilized, this provision is redundant.

- 81 The overall organization of KUKL is divided into 2 departments, Technical and Administration & Finance and each led by a Senior Manager. The internal audit unit reports directly to the General Manager.
- 82 The Administration and Finance department is responsible for all administrative and financial activities and has two divisions, Finance and Administration under it, which are responsible for all financial and administrative activities respectively. The Finance Division has separate units for central accounting, budget and fund, revenue monitoring and project and head office account. It is responsible for preparing tariff proposal and implementing approved tariff rates.
- 83 The Administration Division is responsible for general administration, human resources management, legal matter, public relation and customer care, procurement and central store. There is no separate section or officer for overseeing training. The public relation and customer care unit is a small unit consisting of only 3 staffs for handling all customers related and public relation issues at central level.
- 84 The Technical Department is responsible for all technical aspects of the organization except implementation of large infrastructure development projects funded by ADB and other development partners, which are implemented by the PID. The Technical Manager has been designed to act as coordinator between PID and KUKL to ensure compatibility between rehabilitation, new construction and operation and maintenance.
- 85 The Technical Department has seven divisions under it, which are responsible for water supply service operations, sewerage services operations, project development and implementation, planning, Research and development, non-revenue water and water/wastewater quality assurance.
- 86 The Water Supply Division has management and oversight functions over ten branch offices which are responsible for day to day management of operation and maintenance and providing water supply service to the customers. The Branch Offices are responsible for technical operation and commercial management of the service area under its jurisdiction.

The production and treatment of water and distribution to the consumers, metering, meter reading, revenue collection and customer services are carried out by the branch offices. The Electro-Mechanical section and the Tanker section support the water supply activities of the branch offices.
- 87 The Project Development and Implementation Division have Low Income Customer Service Unit (LICSU), Gwalindaha Project and Tubewell Project under its purview. The two projects are under implementation by KUKL with budget provided by KVWSMB. As these are temporary projects, it may not be necessary to include these separately in the organization chart.
- 88 The R & D division has IT unit, GIS/SCADA/Telemetry sub-unit, Staff Resource Centre and Gender Equality and Social Inclusion (GESI) unit under its purview. These units are virtually non functional due to lack of staff.

**Kathmandu Upatyaka Khanepani Limited
Organization Structure**



* Contract Staff (GM 1, VGM /DGM 1, Company Secretary 1)

* CBP Team consist of DGM/VGM and two Senior Manager who overlap with respective regular grade 1 Senior Manager
Branch Offices: Mahankaichaaur, Maharajgunj, Tripureswor, Chhetrapati, Kamaladi, Lalitpur, Bhaktapur, Naudhyapur Thimi & Kirtipur

Current Functioning of the Organization

- 89 An Interim General Manager is on board, who has been appointed by the Ministry of Urban Development as per amended bye-law of the company. He will be replaced by the new General Manager once the recruitment process is completed and the General Manager is appointed by the board of KUKL. The recruitment process of General Manager has been delayed for several months already.
- 90 Two highest management organizational units, the Technical and Financial Departments are nonfunctional because the vacancies for Senior Manager Positions have not been filled up. The Water Supply Operations Manager is complementing the responsibility of Technical Department while Deputy Managers in Administration Division and the Finance Division are complementing the responsibilities of senior manager and reporting directly to the General Manager.
- 91 Planning division, R & D division and NRW divisions are virtually non-functional due to lack of staff to lead the divisions. The activity of KUKL is mostly focused on routine management of operation of water supply services only.
- 92 The branch offices are responsible for the production and treatment of water and distribution to its consumers, metering, meter reading, revenue collection and customer services. The production gets little attention as the technical staffs are more pressurized to work in distribution activity and dealing with customer complaints.

4.1.3 Staffing

- 79 The present organization structure of KUKL is presented in Fig 2.
- 80 The present organization structure consists of 3 main top managerial positions for the previous CBP expatriate team and has been formulated based on the provision that CBP team will support KUKL in the overall management. As CBP Team has now demobilized, this provision is redundant.
- 93 KUKL has categorized its staff into two main categories, Technical and Administrative. These are further subdivided into various subcategories. The details about these categories have been described in the para on staff regulation.
- 94 The number of approved staff for the organization is 1205. Out of this, 359 positions (27.8%) are technical and 587 (48.7%) positions administrative and 259 (21.5%) positions are unskilled staff. The breakdown of these approved staff positions shows about 1.16% in top management, 3.57% in middle management and 10.12% in lower management level. The support staff constitutes about 85.15% of the total staff.
- 95 There are currently 814 permanent staff and 56 contract staff in KUKL. KUKL has also employed 240 people on daily wage basis mostly on assistant level positions (majority in level 1 position). Though they work as daily wages staff, they work regularly and some of them have worked for long periods, even as long as ten years. Table 2 present the approved positions, permanent staff, contract staff, vacant positions and staff on daily wages based on staff level. The status of these for actual position name has been presented in Annex 3.

Table 2: Present Status of Staff Positions in KUKL

Staff position	Category	Approved	Permanent	Vacant	Contract	Daily wages	Total employed	% Vacant (Permanent)	% vacant (Total Working)
GM/MD	Adm	1	0	1	0	0	0	100.0	100.0
DGM	Adm	1	0	1	0	0	0	100.0	100.0
Level 11 SM	Tec	1	1	0	0	0	1	0.0	0.0
Level 11 SM	Adm	1	0	1	0	0	0	100.0	100.0
Level 10	Tec	7	3	4	0	0	3	57.1	57.1
Level 10	Adm	3	0	3	0	0	0	100.0	100.0
Level 9	Tec	14	8	6	0	0	8	42.9	42.9
Level 9	Adm	6	3	3	0	0	3	50.0	50.0
Level 8	Tec	16	7	9	0	0	7	56.3	56.3
Level 8	Adm	7	3	4	0	0	3	57.1	57.1
Level 7	Tec	26	14	12	0	0	14	46.2	46.2
Level 7	Adm	18	16	2	0	0	16	11.1	11.1
Level 6	Tec	21	18	3	0	0	18	14.3	14.3
Level 6	Adm	57	43	14	0	0	43	24.6	24.6
Level 5	Tec	44	25	19	1	0	26	43.2	40.9
Level 5	Adm	132	109	23	1	0	110	17.4	16.7
Level 4	Tec	60	52	8	1	1	54	13.3	10.0
Level 4	Adm	150	114	36	2	2	118	24.0	21.3
Level 3	Tec	154	129	25	0	3	132	16.2	14.3
Level 3	Adm	211	120	91	3	4	127	43.1	39.8
Level 2	Tec	16	10	6	3	6	19	37.5	0
Level 1	Adm	259	139	120	45	224	408	46.3	0
Total		1205	814	391	56	240	1110	32.4	7.9

- 96 The analysis of current staff data shows that 71.4% of top management (level 10 and above) positions including General Manager and two Senior Managers are vacant. Similarly about 51.2% of middle management positions (level 8 & 9, includes branch managers) are vacant. About 46.2% of Technical officer (mainly engineers, level 7) positions have not been filled up. In the support staff category, about 68% of staff positions are filled by permanent staff and some remaining vacant positions have been filled by contract staff and daily wage workers. The overall percentage of vacancies in permanent position is 32.4%. The total staff working in KUKL including contract and daily wages staff is 1110. The percentage of total staff currently working in KUKL compared to approved staff is about 92.1% and the total support staff compared to approved support staff is 98.2%.
- 97 The preliminary analysis of approved staff data show that the technical staff provisioned for some activities like WTP operation, water supply and tanker operation are insufficient for the purpose. There are only 9 staffs in Bansbari WTP against the requirement of at least 18.
- 98 The number of staff per connection based on approved staff is 6.19 while the number of staff currently in work is 5.70. The number of staff per connection has decreased from 7.94 in 2008/09 to 5.70 in 2013/14 which is a good indicator but it is to be noted that the shortage of technical staff has adversely affected on the performance of the company.
- 99 KUKL outsources some of its activities to private sector. The activities which have been outsourced are leak repair works, KUKL head office security, office cleaning and gardening works.

- 100 KUKL has initiated action for recruitment of staff in the past by publishing the vacancy notice inviting application for vacant posts but these efforts have mostly not been able to produce any result due to various reasons. KUKL had successfully recruited permanent staff through internal competition in 2013 when it recruited 161 staffs consisting of 26 technical staff and 135 non technical support staff from level 3-5.
- 101 KUKL effort to recruit permanent staff through open competition in 2013 and contract staff in 2014 also through open competition failed to materialize due to political pressure and the complaints lodged at CIAA and investigation by CIAA.
- 102 KUKL is currently conducting recruitment of General Manager by open competition but the KUKL Board has not been able to decide and appoint the General Manager as yet for last eight months.

4.1.4 Staff Regulations

- 103 KUKL staff regulations describe the guiding principle of non-discrimination in employment, holding regular formal and informal meetings with staff, and maintaining communication with the staff unions, and this document is the principal document for human resources management in the company.
- 104 The current staff regulations covers areas like authority of KUKL Board, General Manager and Managers, in implementation of regulations and (a) recruitment and appointment of staff, promotion and transfers, (b) working hours and leaves entitlements, (c) remuneration, allowances and other benefits (d) code of conduct and punishment, and (e) a miscellaneous section covering submission of works accomplishment and separation from the company.
- 105 The regulations have been amended six times during the seven years of existence of the company. The staff structure has 11 levels below the General Manager. The staff regulations are lengthy and lack clarity such as the kind of employments offered by the company, levels of staff, and category of staff and further career path.
- 106 The regulations allow delegating authority of implementing the regulations from the Board of Director (BOD) to various level of management, except the authority of taking punitive actions and listening to grievances. The authority of staff recruitment has not been delegated to the management.
- 107 The regulation has provisioned a staff recruitment committee headed by one of the board directors and all staff recruitments are made by this committee, including staff hired on long term daily wage basis.
- 108 The staff regulations indicate that KUKL Board has the mandate to recruit top management staff like General Manager and down to the level of Deputy Managers on performance based contracting with fixed terms. But these types of contract have not been used in KUKL.
- 109 The regulation requires management to submit the status of staffing as compared to approved staffing positions to KUKL board for review every fiscal year. Vacancies need to be filled up within a period of 9 months. But the vacancies have remained unfulfilled for long time.
- 110 The staffing structure and career growth procedures follows the government service structure of dividing the staffing to various categories of service like technical, administrative and others. Similarly KUKL employment is divided into two broad "Service Categories" of (a) Technical; and (b) Administration. Technical category is subdivided into additional five subcategories making in total six categories and administration into further three additional subcategories making in total four categories. The career development path of these groups defined in the staff regulations is complex with several restrictions in moving from one category to another or being assigned to another category and several amendments.

- 111 Fresh recruitment is made through open public competition invitation. The selection process includes written examination or practical examination or interview; the procedure may include all three or less depending on category of recruitment.
- 112 Promotions are made through (a) internal competition consisting of written examination and interview only or (b) internal performance evaluation based on a mix of performance evaluation, length of tenure, educational qualifications and trainings.
- 113 Elaborate procedures to be followed and compliance requirements are described with the declared aim of transparency and fairness during the process of recruitment and carrying out promotion of staff. Each staff is required to submit a list of accomplished works, based on milestone/ periodic/ targets set again based on their job descriptions.
- 114 There are a significant number of allowances payable to the staff, but all are universal and not performance based. The staff regulations provide for salary level review every two years again on universal basis to compensate for inflation and other factors.
- 115 Career opportunities exist in the company, but the company has not been able to provide ample promotion opportunities to staff, who have been working in the company for a long time. Critical management positions lie vacant in addition to large number of technical staff required for daily management of operations of water supply.
- 116 One provision of the staff regulations allow the management to reward cash or financial reward to individual performers or work groups or area groups based on annual performance. This provision has been used to reward employees during the anniversary celebrations of the company.
- 117 Phnom Penh Water Supply Authority is a well known water utility in Cambodia which has shown exceptional success in converting a problematic water utility to a world class utility in about 20 years time. An analysis of comparison has been made between the staff regulation of PPWSA and KUKL to identify the problems associated with KUKL staff regulations and have been presented in Table 3.

Table 3: Comparison of Staff Regulations at KUKL and PPWSA

PPWSA	KUKL
Performance Evaluation is well established and carried out based on job description four times a year. Line Managers are responsible for evaluation and discussing face to face with staff. Performance evaluation result is used for decision on performance bonus, annual grade increment, rewarding grade increment and promotion to higher positions, determining training requirements and also punitive measures.	Performance evaluation is not well established and is conducted annually rather subjectively in the absence of job description. The practice of confidential evaluation by immediate supervisors and managers, has not been implementable and acceptable to staff. The annual performance evaluation has been the basis of promotion to higher ranks only and has not served to be a reliable base for any punishment and rewards.
Promotion is based mainly on performance/merit and written exam	Promotion is based on unreliable performance evaluation only or additional written exam
Staff disciplinary measures: Majority of the members present in the meeting of Discipline Council, led by Director General consisting of all Department Chiefs, Chief of Human Resources Section as Secretary of council and an Employee Representative and deals with disciplinary issues. The Director General has the authority of sanctions and dismissal.	Staff disciplinary measures: Lengthy process requiring written notice to staff giving evidence of violation of code of conduct ; and opportunity of written clarification by staff (up to two times), if staff refuses to receive letter, then need to publish notice in national newspaper, and if staff not satisfied can appeal to higher authorities; the result is: sanctions are rarely applied.

	The General Manager has the authority to take sanctions including dismissal for non-officer level staff. BOD has the final authority regarding dismissal of Officer level staff.
Probation period is one to three months	Probation period is usually one year, and six months for women
Management is authorized for staff recruitment based on annual quota approved by the BOD	Staff recruitment down to level of daily wage staff to be recruited by the Staff recruitment committee under the chairmanship of a Board Director.
All Bonuses and allowance are not universal, performance bonus and increment of annual salary based on performance evaluation and positive result of written exam. All staff are required to appear in annual exam.	All allowances and bonuses are universal
Staff Training/Workshops followed by examination of the trainees. For performance evaluation, passing examination is mandatory	No such requirements in KUKL
Allowances 1 Performance bonus (performance based) 2 Overtime fees 3 Mission fees 4 Health compensation 5 Uniforms and occupational safety materials (Water Charges allowances were removed to force morally other government agencies to pay water charges by showing that even PPWSA staff pay)	Allowances (All universal) 1 Water charges allowances (unmetered ½” connection charge including sewerage charges) 2 Annual function day allowances 3 Overtime, 4 medical costs: one month pay annually 5 Education allowances 6 Uniform allowance 7 Meal allowances 8 Transport allowances 6 Festival allowances equivalent to one month salary, applicable for daily wages staff also.
Working hours 48 hours a week	Working hours 40 hours a week in summer and 35 hours a week in winter.
Leave entitlements Annual Home leave 18 days Sick leave up to 2 months with full pay, 3 to 6 months with 60% pay, 7 to 12 months with 30% pay, retirement if more than 12 months on account loss of physical capacity to work. Other Special Event Paid Leaves Maternity leave 90 days Wedding or wedding of natural children: leave 3 days Funeral leave on death of family member 3 days	Leave entitlements Annual home leave 30 days per annum Festival leave 6 days, Casual holiday 6 days per annum Sick leaves 12 days per annum Other Special Event Paid Leaves Maternity leave 60 days Death of a family member, up to 15 days Study leave 3 years with full pay but on condition will work for the company on completion of studies otherwise return salary amount Special leave: one month at a time up to 12 months during entire employment period on serious illness of employee.
Unpaid leave Those who take leave for more than one month are not entitled to receive salaries	Unpaid Leave Extraordinary leave 15 days at one time up to 6 months in case of Extraordinary situation and when other leaves entitlement have been consumed

- 118 The Performance evaluation at PPWSA is well established and being constantly improved, KUKL is yet to establish a reliable performance evaluation system.
- 119 Staff training is made meaningful at PPWSA by requiring staff to pass tests on the training theme, KUKL has no such requirements.

4.1.5 Job Description

- 120 Though Job Description has been a mandatory provision to be provided to all staff as per KUKL staff regulation, its practice has just started. Earlier job description has been given to the contract staff on top management positions including the General Manager. KUKL Administrative Division has recently taken initiative to write job description and has issued it to head of the divisions and the sections and units under its purview.
- 121 KUKL has attached TOR for the General Manager with the recruitment notice for GM. The TOR shows some confusion on the division of responsibility between the board and the General Manager. The analysis of Job description for General Manager shows some issues requiring consideration.
- 122 The General Manager is the highest ranking executive manager in KUKL, in charge of the day-to-day operations and management of the company. The General Manager must provide strong leadership, and be able to give clear direction and guidance to the management team, whilst at the same time allowing them the autonomy to operate successfully. The General Manager needs to provide executive leadership across the organization, and where necessary, challenge current performance levels.
- 123 The role of the General Manager as the Change Agent cannot but be emphasized to bring change in organizational management of KUKL. The newly established company needs to plan and implement its business through clearly prepared targets and execution plan, and defined supporting resources in annual work plan and midterm plans. This important target setting and execution plan can be done with preparation of rolling business plans and annual business plans, which clearly define the mission, vision and strategic objectives of KUKL to include human resources, financial and operational management as well as suitable organizational structure to implement the business plan and establishing a change management process.
- 124 Though KUKL was established more than seven years ago, the organization is still at entry of transition from a government corporation to a more autonomous commercially oriented company. The transition involves change management, which demands change management leadership. The change management can be understood at three distinct but interrelated roles of various levels of management of a company, such as
- Change Demand/oversight – the level of management with power to determine that change will occur i.e , the KUKL Board
 - Change Agent –the level of management that sees a predetermined change occurs, i.e General Manager
 - Change target – the level of management and execution level offices, who are asked to change knowledge, skills and behavior.
- 125 The role and functions of General Manager as the Executive Leader shall be in developing, analyzing, promoting, implementing, and evaluating business plan and establishing change management leadership at KUKL.
- 126 The responsibilities of the General Manager should reflect the needs to address aligning daily business practices to match vision, mission, and core values of KUKL so that they are effectively and consistently put into action, deploying management staff to accomplish the organization’s mission and operational plans, directing and motivating a competent management staff team to optimize individual and organizational units capabilities, evaluating organizational arrangements; developing

and implementing standard operating procedures and management process, administrative policies and programs while allowing for decentralization of operations and placing authority, responsibility and accountability at the appropriate levels within the company.

- 127 The responsibility in particular needs to address, acquiring, and evaluating technology programs, which will reduce costs, allowing KUKL to work efficiently and effectively
- 128 The responsibilities domain of the top executive is important in the sphere of representation and promotion of KUKL as related to government agencies, municipalities, KVWSMB, WSTFC, donors, and the general public, to include special interest groups like consumers groups and NGOs.
- 129 The executive leadership is expected to provide executive oversight to the legal department, internal audit, and public relations.
- 130 Finally the executive leadership is expected to oversee the preparation of studies, reports and documents for submission to the Board of Directors with appropriate recommendations, assist in developing board policies, rules, and regulations and be responsible to the Board of Directors for implementing their policies, decisions, and actions, oversee a process for preparation of meeting agenda items, and approves all input on agenda items prior to being forwarded to the board for board meetings.
- 131 The job description prepared by KUKL for division heads reflect only current routine works, and need to be revised and strengthened in anticipation of contents of a business plan of the company and expected leadership challenge as managers, motivators and decision makers matching the delegated power to their positions. Further the higher and mid-level management are both a kind of change agent as well as change targets; and the role play should be reflected in their job description. The present job description of the Chief of Technical Department has been presented as sample in Annex 4.
- 132 The Management level positions are targeted for performance based contract at the beginning of reengineering of current KUKL organization; and hence the job description need to be carefully prepared so that the performance targets are well defined; and job descriptions are amenable to be included in the performance based contract.
- 133 According to the staff regulations, the supervising managers are required to give job description to each staff mentioning the works to be accomplished and the staffs have to submit a list of accomplished works, based on milestone/ periodic /targets set again based on their job descriptions for evaluation. However no job descriptions have been given to employees, though the management may be punished by the KUKL board for not giving job descriptions at the time of employment or whenever assigned to a new position.

4.1.6 Working Procedure

- 134 KUKL internal work processes have not been standardized or defined and there are no standard of manual of procedures. The responsibilities of the departments or divisions or branch offices or other organizational units, chief of these organizational units, and reporting requirements to the supervising units and monitoring responsibilities of the supervising units have not been spelled out.
- 135 The main mode of internal reporting is informal. Informal communications takes place daily among the top management; and other operational staff from branch offices or offices beyond the central office in an adhoc manner to deal with specific issues that have arisen and needs urgent attention. The mode of communication is that similar to crisis management or firefighting. However, the approval process is formal and well documented.

- 136 The above result is an indication that the company is conducting its business as usual inherited from its predecessor, a government corporation. The company has not been responsive to fulfilling critical lead and management positions nor management actions needed to comply with operating license and asset management agreement.
- 137 The authority for procurement of goods and services has been delegated to lower rungs in the organization with ceilings. The General Manager can make decisions on procurement up to Rs. 12.5 million, while Technical Department Chief has the authority up to Rs. 10 million. Branch Managers have been delegated authority up to Rs.5 million.
- 138 Procurement is done following the procurement law of the government. KUKL has no experience in executing large contracts involving international contracts or procurement using donor guidelines.
- 139 10 Branch offices of Water Supply Division and the Sewerage Division undertake the operation and maintenance works of the assets. KUKL is finding difficult to organize an adequate maintenance program of assets due to lack of adequate funds.

Outsourcing

- 140 Limited outsourcing in service provision is in practice in few distinct areas like leak repair works, security of head office, office cleaning works and gardening. The procedure of outsourcing is direct contracting to short listed contractors for leak repair works, and limited competition in other works. The procedure for outsourcing is not clearly defined and may be in the process of development as the practice has been started recently in the company.

Bills Payment, Notifications of Supply Schedule and Interruption in Supply

- 141 KUKL has computerized billing system in three branch offices. There is ongoing effort to installing computerized systems in all branch offices for the convenience of the customers and management improvement. However the computerization contract has faced difficulties in seeing the completion, even after several years of starting implementation.
- 142 Currently meter readers provide manual bills, often meter reading is not regular, and often consumers go to the office with meter readings and get a manual bill and pay water bills to avoid penalties. The customers who receive less than 3 m³ per month are waived of meter installation and charged minimum charge. More than 30% of connections are in this category.
- 143 Customers have to go to their Area Branch Office to pay the water bills. A small number of large connection consumers pay bills through banks. There is limited information to the consumers on the alternative payment methods offered by KUKL to pay the bills through the banks and no such information is available at KUKL website.
- 144 Customers are informed about service changes or interruptions in a government newspaper only or at website of the company. The current mode of information on water supply schedule is simply not effective, difficult to comprehend and does not reach the consumers. If KUKL could publish reliable information on water supply schedule and interruptions, which is easy to comprehend, then apps developers would develop useful free software on their own as for load shedding schedule of Nepal Electricity Authority.
- 145 KUKL does not carry out customer surveys and is not encouraged itself to do so in the context of current very unsatisfactory service level of one supply every 5-10 days. KUKL is severely constrained in addressing the improvement in supply, desired by the consumers, for inadequacy of natural resources for immediate and visible augmentation in supply and any other plans for augmentation. However the license granted by KVWSMB states that both parties will carry out jointly customer surveys every two years on perception of service level.

146 KUKL financing largely depends on its customers as all operational costs are covered from revenue streams of water supply and sewerage service charges. Value of customers as a source of revenue, which is meeting almost all operational costs of KUKL, is very important for the company, and KUKL needs to recognize seriously the value of its customers as the main source of revenue for its existence.

4.1.7 KUKL Labor Union

147 Five unions are active in KUKL officially. These unions are affiliated to five major political parties. KUKL has not been able to hold election for employees union for some years to elect the official union of the company. The unions are powerful because of their patronage of major political parties. Each union has its office in KUKL premises.

148 The unions take much interest in staff transfer, promotions and recruitment. They frequently interfere in staff management to fulfill their political interest. The KUKL management does not find free hand in staff related issues and faces great problem in staff management. The recruitment of new staff has been a problem for KUKL and one reason KUKL management in the past has not been eager to do new recruitment is due the interference of unions.

4.1.8 Present Problems

149 The main problem of KUKL presently lies in long delays in its decisions on policy matters. The decision on appointment of General Manager has been pending with the board for last 6 months. KUKL board frequently gets involved in micro-managing the affairs of KUKL.

150 The lack of leadership is a serious obstacle in normal functioning of KUKL. The presence of only 35.7% of top management team at present shows the level of crisis in the organization. An efficient, productive, financially sustainable and stable organization cannot be expected from such a deficient situation.

151 The technical department is too heavily loaded and is mostly involved with operational and customer related matters and so the technical department have been unable to provide adequate direction to planning, projects, R & D and monitoring functions.

152 The technical functions of water production and treatment is mixed with distribution and customer related functions in branch offices. The focus on technical functions is diluted due to more importance given by staffs to deal with customer related issues.

153 There is serious understaffing of technical staff in all water works. However, at the same time it to be noted that excessive staff without technical skills remain unutilized and the presence of these highly underutilized workforces is a de-motivating factor for those who need to work. The posting of staff does not happen as per qualification and performance of staff. The influence of staff unions in recruitment and transfer of staff is high.

154 The public complaints on lack of responsiveness to customer complaints are high. The public image of KUKL is very low.

155 KUKL has not been able to enforce its staff regulation and evaluate performance of its staff fairly and implement reward and punishment system. There is lack of basis for evaluation as job descriptions have not been prepared and issued.

156 The morale of KUKL staff is very low, as the working environment is that of an unstable organization with uncertain future.

- 157 The time taken for recruitment of staff is very long. The staff recruitment committee has the authority to hire all staff including staff hired on long term daily wage basis. The staff recruitment processes in the past have mostly been engulfed in controversies with the CIAA intervening for investigation.
- 158 The age profile of management level staff is inclined towards the retiring age limit, and with an exodus of the management staff occurring since the Voluntary Retirement Scheme (VRS) program in 2009, most of the top management staff level would have been retired within the next three years. This exodus of management staff will certainly further deteriorate the management capacity of KUKL with all institutional memory gone. The extent of retiring staff at KUKL would have been a challenge even for any utility with good governance. The problem is further exacerbated that the Melamchi Water Supply project is expected to be commissioned at the time of retirement of the management staff. This will have an adverse effect on the skills, experience and knowledge base of the company. There is no succession plan in the company, so that the responsibility would be shouldered by knowledgeable new managers, when the old managers retire.

4.1.9 Analysis of Background of Present Problems

- 159 KUKL board does not have code of conduct and board members are not provided with any terms of reference indicating their responsibilities and duties. Presently, the board members are accountable to customers but KUKL has not fulfilled its obligation of publishing a report annually giving details of the performance of KUKL with respect to the technical norms and service standards as prescribed in the service standard Appendix of the License. The summary of report is required to be published in national daily newspapers. The monitoring agency, KVWSMB has not been able to enforce this requirement for public evaluation of performance of KUKL.
- 160 KUKL has been formed with the objective of running it professionally and commercially without political interference. But the culture of political interference has not gone away. With poor performance and financial weakness, KUKL has become more dependent on the government for support and resulted in inviting political interference.
- 161 KUKL was not able to change the work culture of staff who had been previously working under the government corporation. KUKL was unable to inject new staff in the management level with a new working culture of working in the company.
- 162 The potential causes of current passiveness to “change management” of the staff indicated during the study are;
- history of lack of information on intended changes at KUKL and the unclear change agenda, such as KUKL is providing water services as much as possible and the current poor services will automatically improve once Melamchi Water Supply Project is completed.
 - belief that the organizational change forced by external institutions and donors
 - the employees fear failure of organization and losing their jobs
 - the staff lack confidence and motivation to implement the change
 - the belief that the external institutions are placing low importance on their jobs
- 163 KUKL has not been able to recruit staff by open competition due to complaints and investigation by CIAA. All staff recruitments in KUKL including staff to be hired on long term daily wage basis are made by staff recruitment committee headed by one of the board directors. The centralization of hiring even on daily wage basis limits the capacity of management to manage the organization.
- 164 KUKL was unable to induct new management staff from outside to manage change management in the beginning of the reform.

- 165 KUKL had recruited CBP Team for supporting it in its management and capacity building of its staff to capacitate them to manage KUKL effectively independently. But this support has not yielded much result in its 4 year duration. KUKL has not been effective in managing the CBP Support Team.
- 166 KUKL management has not been serious to meet the requirements of staff regulation and has failed to provide Job description to all staff. According to the staff regulations, each staff has to submit a list of accomplished works, based on milestone/ periodic /targets set again based on their job descriptions. However no job descriptions have been given to employees and so the annual work accomplishment evaluation with work targets and accomplishment is not clear and objective. The submitted form are evaluated confidentially by two persons; one immediate supervisor and a reviewer of higher rank and the review form will be finally submitted to the Review Committee, which makes the final evaluation.
- 167 However, review is not confidential practically and every reviewer is forced to give only the “excellent” evaluation to all the staff, and evaluation is not very much effective and the decision of the review committee may be decisive than other evaluations. There is no concept of performance evaluation where the reviewer sits with the staff to be reviewed to discuss openly the achievement of the performance requirement and also discuss what kind of training may be required if the performance is below accepted or lower levels. Instead the evaluations by supervisors are made confidential, but because pressure of unions and the culture of avoidance to take responsibility for performance of others, all staff are evaluated excellent. The evaluations results affect only in promotion of employees; which occur at large intervals of time of employment.
- 168 The organizational environment in KUKL is that of an unstable and unknown future. The rumor that the top and mid-level management down to the level of Deputy Managers will be replaced has been in the air from the time of establishment of KUKL. It seems the entire management team is just waiting the Damocles sword hitting them; virtually the attitude of management staff is they cannot lose more, as they are already retiring and thus have low incentive to perform.
- 169 The age profile of management level staff is inclined towards the retiring age limit with most of them recruited in 1993/94, an exodus of the management staff is occurring since the VRS program in 2009 and most of the top management staff level would have been retired within the next three years. This exodus of management staff will certainly further deteriorate the management capacity of KUKL with all institutional memory gone. The extent of retiring staff at KUKL would have been a challenge even for any utility with good governance. The problem is further exacerbated that the Melamchi Water Supply project is expected to be commissioned at the time of retirement of the management staff. This will have an adverse effect on the skills, experience and knowledge base of the company. There is no succession plan in the company.

4.2 Technical

4.2.1 Planning

- 170 KUKL is required to prepare plans, programs, policies and strategies for improvement of various aspects of water supply services and implement them to improve water supply services in KV as required by the license and asset lease provisions. These plans should include Water Sources and Treatment Plant, Energy Management Plan, Emergency Response Plan, Community Tap Improvement Plan, Tanker Service Plan, Low Income Priority area plan. The programs would include Water Quality Sampling and Testing Program, Maintenance Management Program, and Public Information Program. But KUKL has not adopted any of these plans though draft plans have been prepared by CBP Team. The absence of plans and program on main activities of KUKL has left it with no direction to achieve improvement in its services. The planning division is poorly staffed and without its head.

- 171 On capital investment side, there are three agencies, KUKL, PID and MWSDDB implementing the water supply capital investment projects. But there is no clear-cut target for each agency to achieve in terms of output besides completing the physical project. KUKL/KVWSMB does not have any control over the progress of these projects.
- 172 The planning coordination between KUKL, PID and MWSDDB is weak. All three agencies are acting independently with their own plans to complete the project. The delay in completion of Melamchi project will effect planned water supply operation but these delays are neither discussed nor strategies developed to deal with such delays so as not to worsen the service level. It is likely that the completion of Melamchi Diversion Project may be further delayed. There is no contingency plan for managing the situation if such delay occurs.
- 173 KUKL is implementing distribution network extension and production improvement from water sources within Kathmandu Valley each year to deal with shortage situation. But these works are not planned in coordination with ongoing projects. Most of these facilities (which include deep tubewells with or without treatment and minor distribution extension) may not be operable after the completion of Melamchi project except for emergency purpose.
- 174 The design of Melamchi water system has assumed that the existing water sources will be used for supplying water to areas upstream of service reservoirs after the commissioning of Melamchi project. But there has not yet been any plan on how to use this water to effectively serve these areas. This may create a situation where water may go on waste due to want of supply area.
- 175 There are no specific plans and strategy on how to change the supply from the existing system to the new network system constructed under Melamchi project.
- 176 KUKL does not prepare operational plan with operational targets. So the staffs are not focused toward any target for achievement.

4.2.2 Operational

- 177 KUKL is facing great operational challenge because of acute shortage of water supply and a poorly developed distribution network system. It is more aggravated each year due to persistent delay in completion of Melamchi project. The water is distributed on a rotational basis and the rotation is presently 5-10 days depending on the season. This is expected to increase further with each passing year with more valves to be installed and operated to serve more people with less water.
- 178 KUKL has not been operating all existing tubewells and pumping stations effectively because of shortage of operational manpower and lack of operational budget.
- 179 KUKL does not use Standard Operation Procedures (SOP) for water treatment plants and other water supply facilities including water sources. Though Operation & Maintenance Manuals are available for three major water treatment plants, the procedures are not being followed as there is shortage of manpower and necessary maintenance fund.
- 180 KUKL has not been able to operate bulk meters installed at sources, treatment plants and reservoirs to record the production and distribution of water. The measurement of water at present is not based on actual but based on historical data or on personal judgment.
- 181 The existing water supply system is deteriorating with the passage of time. KUKL and the projects have not been placing much value to existing system and conducting rigorous measure to reduce leakages because the existing network is proposed to be abandoned after the commissioning of Melamchi project. It is not felt necessary to invest much in the existing network system.

182 The operation of water treatment plants is not effective and efficient. The pumps and equipments are in a state of disrepair and water quality laboratory is almost in abandoned state. The chemicals for treatment are added on the basis of technician's assessment.

4.2.3 Present Problems

183 The shortage of water in Kathmandu Valley is very severe. The supply duration is diminishing each year as the availability of water per connection (person) is diminishing every year. The supply is now one of the minimum in the capital or major cities of south Asia. Some areas in Kathmandu receives water for only about 1/4 hour once in ten days which is much less than the minimum required and may not be sufficient for drinking purpose also. This situation is likely to deteriorate until additional water becomes available.

184 There is great disparity in distribution as some consumers receive water for 24 hours while others receive for about 1-2 hour once every 5-10 days. In terms of number, 6.91% of connections upstream of reservoir consume about 26% of water (17.2% during dry season) while 5.25% of total connection served by Balaju reservoir is distributed about 2.87% of total water (2.78% during dry season).

185 But it is not clear when and how these serious problems would be solved even after the projects under implementation are completed. The coordination between KUKL, PID and MWSDDB is lacking. As a result, the benefit of huge investment made in water supply sector for last many years has not been felt by the consumers. The demonstration projects in Buddha Nagar, Siphel and Kusunti area are some of the examples.

186 The management of water supply system is very poor leading to inefficient water usage, water loss and degradation of water quality. The image of KUKL with customers is very poor.

187 KUKL has not been able to increase overall production and meet its objective of increasing total water production from in-valley sources because of poor operation and maintenance of pump and machineries. The frequency of breakdown of pumps and machineries is high.

4.3 Financial

4.3.1 Financial Status

188 The main source of income for KUKL is water and sewerage services billing, and other charges like maintenance charges, penalty charges, new connection charges, inventory sales and miscellaneous income. The total income level in Fiscal year 2013/14 was about Rs.900 million up from Rs 573 million in FY 2012/13.

189 The stream of total revenue for FY 2013/14 consists of 73.3% from water supply services, 19.6% from sewerage charges, 7.1 % from miscellaneous sources like penalty and new connection charges. The water supply revenue composition is 70% from metered connections, 15.7% from unmetered connections, 6% from government institutions and 7.4 % from tanker sales.

190 KUKL has made an expenditure of Rs 815.6 million in F/Y 2013/14 with its breakdown of 26% in operation and maintenance, 45.2% in staff salaries and allowances, 6.4% in other admin expenses and the rest 22.4% in fees and interest.

191 The financial situation of KUKL has improved slightly after the revision of tariff in 2013. The operating ratio of the utility has reduced from 0.984 in 2012/13 to 0.865 in 2013/14. KUKL has made an operating profit of Rs.85.00 million in 2013/14 after incurring huge losses for many years. In 2014/15, KUKL has projected that the company will make an income of Rs.908.65 million and will make total expenditure of NRs 920.74 incurring a loss of Rs. 12.09 million excluding depreciation amount.

192 The above figures do not show the actual cash flow situation of KUKL. KUKL has a collection ratio of about 70% only. So the cash flow is not sufficient to meet operational requirement and cash crunch is very serious. In 2013/14, the cash deficit to meet operating expenditure was Rs 182.9 million which is projected to be reduced to Rs 155.5 million in 2014/15.

193 Table 4 presents the total billing, cash collected, total operational expenditure and the cash deficit to meet operational expenditure for last four years. The detailed income and expenditure budget for last 3 years has been presented in Annex 5.

Table 4: Income and Expenditure Status for last 4 years

Particulars	Fiscal Year			
	2068/69 (2011/12)	2069/70 (2012/13)	2070/71 (2013/14)	2071/72 (2014/15)
Total Billing	579511	573479	900628	908656
Cash Collection	579511	422800	632738	765231
Total Operating expenditure	664216	683060	815626	920743
Cash Deficit to meet Op. Exp	233838	260260	182888	155512

194 The analysis of projected expenditure for year 2014/15 shows that the staff salary costs cover about 46.4% of total expenditure while power, chemical and maintenance costs, other administrative costs and the fees and interest cost consist of 26.6%, 5.5%, and 21.5 % of total expenditure respectively. In last two years from 2012/13 to 2014/15, the expenditure in salary has increased by about 41.74% while the expenditure in operation and maintenance, other administration and the fees and interest has increased by 33.4%, 41.1% and 22% respectively.

195 KUKL currently is covering operational cost and some maintenance costs to a fair extent through its revenues. However it is to be noted that KUKL has been providing funds for only critically essential chemicals, power and other materials; and adequate maintenance works have been deferred for want of funds. Preventive maintenance and asset management is not a priority for lack of funds. So the balance sheet does not show actual financial status of the company.

196 The account receivable is high and is increasing every year. The account receivable in 2013/14 is NRs 1,042 million which is 14.97 months revenue and is very high from international standard and shows very poor performance in collection of revenue. The collection efficiency is about 70% every year and the arrear is increasing every year. Fig 4 shows the total KUKL arrears in last 3 years and their increasing trend.

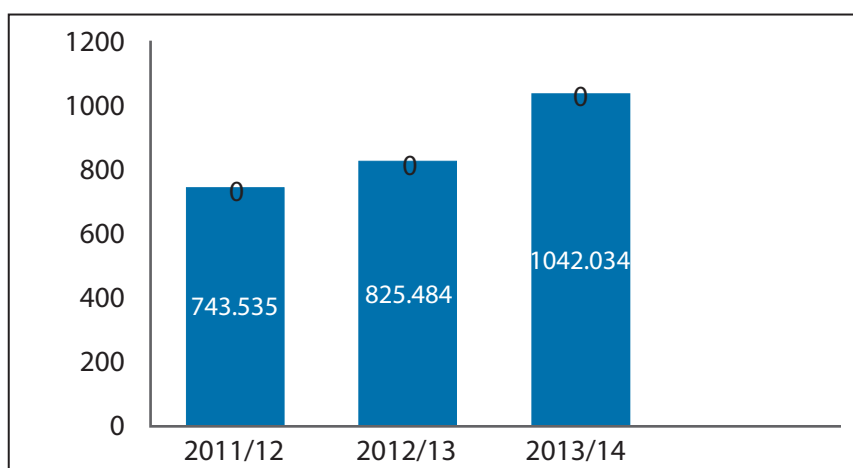


Fig 4: KUKL Arrear in last 3 years

197 KUKL has not paid license and lease fee to KVWSMB and regulatory fee to WSTFC for many years due to shortage of cash flow. It has started to pay these fees partially from the soft loan made available to it by KVWSMB.

198 KVWSMB and the Government have started supporting KUKL in its operational problems and is providing operational subsidy. The government has provided an operational subsidy of Rs 40 million in the FY 2014/15.

199 KUKL has received soft loans of Rs. 92.5 million for dry season management and Rs. 64.9 million to cover operating deficit from KVWSMB till 2069/70.

4.3.2 Tariff

200 The tariff for water supply and sewerage service in KV has been revised two times since KUKL took over management of operation and maintenance of water supply and sewerage services. The last tariff revision took with effect from July 16, 2013. The tariff was raised by about 82% for all categories of consumers including domestic, non domestic, big consumers and tanker service. Table 5 shows the present tariff for water supply and sewerage services in Kathmandu Valley.

Table 5: Present Tariff for Water Supply and Sewerage Services

Pipe Size (Inch)	Minimum Consumption (liters)	Metered Connections		Unmetered Connections (Rs.)
		Minimum charge Rs	Volumetric Rate Rs/1000 liters	
½"	10,000	100	32	785
¾"	27,000	1910	71	4595
1"	56,000	3960	71	9540
1.5"	1,55,000	10950	71	26280
2"	3,20,000	22600	71	54255
3"	8,81,000	62240	71	149415
4"	1,810,000	127865	71	306880

Sewerage Charge: 50% of Water Charge

201 The impact of tariff on revenue was however only about 63% which is about 19% less than expected. KUKL has attributed this lower than expected impact of tariff on revenue to the change of customers from unmetered to metered category and reduction in overbilling of customers.

202 Most consumers pay minimum charge because the supply is scarce. The consumption is not expected to be higher than the minimum where the supply is limited to 1-2 hours every 5-10 days. The analysis of water consumption based on water production shows that the availability of water is only about 443 l/connection/day during wet season and 0.265 l/connection/day during wet season.

203 KUKL has not been able to get dues from government agencies like army and other government agencies, a typical problem encountered by the utilities. Some effort has been made by KUKL, but substantial dues still exists.

204 The Government has stopped paying charges for public stand posts since last tariff revision. The responsibility of paying stand post charges have now been transferred to the municipalities.

4.3.3 Present Financial Obstacles

205 Though some improvements have been seen in the financial status of KUKL after the last tariff increase, it is still insufficient to meet the operating expenditure of the company in terms of cash. It has not been able to allocate enough budgets for proper maintenance of water supply system.

- 206 KUKL has been able to collect only about 70% of its billing annually. The rate of increase of arrears is very high. The arrears increased by 26% in 2013/14 and reached Rs 1,042 million which is equivalent to about 15 months of billing.
- 207 The main constraint in improving financial situation of KUKL is the availability of limited water for sale. The customers are ready to use more water irrespective of charge. The delay in completion of Melamchi project is one main hurdle in improving financial health of KUKL. Melamchi Project has been initially targeted to be completed by 2012 and the completion would have increased the water supply sale volume by more than 150% and improved the water supply situation.
- 208 The compulsion of KUKL to make new connections despite the shortage situation is contributing to further deterioration of financial health of the company. On one hand, it is reducing the income of the company (by selling water at minimum rate to new customers instead of volumetric rate to existing customers) while on the other side the deterioration of service as a result of supply sharing diminishes willingness of customers to pay bill.
- 209 The service level is poor and the customers are not happy with the service. The customers are reluctant to pay the bill in time.

4.3.4 Analysis of background of financial obstacles

- 210 The product for sale is very small. The per capita sale volume of water is so small that the minimum tariff applies in most cases. Though the tariff rate looks high, the average charge paid by customers is low.
- 211 There is more pressure from the government and the regulatory agency to look at social aspect rather than commercial aspect of service. KUKL could collect good revenue by selling water to big consumers at Rs 71/m³ rather than selling water to domestic consumers at Rs 10/m³ only. But the regulatory agencies have not encouraged KUKL to sell water to big consumers but to concentrate on domestic consumers only.
- 212 Melamchi project, which has been planned for completion by year 2012 originally, could not be completed in time. As a result, the availability of water did not increase and the sale volume remained almost constant.
- 213 KUKL was unable to stop distribution of new connection in spite of its inability to add new water into the system. The addition of each new connection diverts some water which it used to sell at Rs 32/cum to existing customers to new customers who can consume minimum water and pay the minimum charge at the rate of Rs 10/cum.
- 214 The collection ratio is very low and the arrear is too high. KUKL reasons that this problem has been passed on by its predecessor and many of the connections which has not been paying water bill may not actually exist. This may also be due to the fact that KUKL meter readers are billing at high unmetered connection rate in areas where there is shortage of water and people have removed their meter themselves.
- 215 The charge for public stand posts used to be paid by the government and this money was acting as indirect subsidy from the government. But it has now been stopped and the municipalities have been given the responsibility to pay for public standpost, this support from the government has been lost.
- 216 The lease fee imposed on KUKL is high based on the limited commodity available for sale and the inability of the owner to increase sale volume by completing Melamchi Project. It may be reasonable to charge lease fee at a rate of 6% of assets only after the completion of Melamchi project.
- 217 There is confusion in financing responsibilities between KUKL and KVWSMB and mode of flow of fund from KVWSMB to KUKL.

5. PRESENT COMMUNICATION AND REPORTING SYSTEM

5.1 Internal to KUKL

- 218 Internal communication is mostly through informal meetings of lower unit heads with the top managers of KUKL, informing about any issues needing attention on an adhoc basis, whenever the needs arise. There are no periodic meetings of the General Manager and various departments or heads of the various units. The periodic meetings are felt not essential for lack of agenda and real time data on operational matters.
- 219 There are no periodic reporting requirements for Branch Managers to report to the Water Supply Division or Water Supply Division reporting to Technical Department. The lack of technical staffing at all levels; at higher management level and branch offices on their daily operations has been also a factor for timely and adequate management of works of these offices.
- 220 No monitoring is possible without measurement of basic data on state of raw water sources, the extent of treated water production, the extent of water supplied, level of service, or quality of service and many other maintenance requirements. However, the operational data are not recorded for lack of the measuring device or non functional devices or for lack of staff to carry out the measurement or related tasks.
- 221 There is no formal recording procedure either for identified maintenance works or operational shortcomings.
- 222 No plan exists currently to establish this monitoring mechanism in terms of equipment installation or personnel deployment to establish and enable the operational monitoring system and to establish a recording procedure of identification of maintenance measures and related issues addressing management procedure. The Management lacks basic information needed for proper management of water supply. The top management and the operations units are functioning as previously prior to establishment of KUKL as a company under private company law.

5.2 External to KUKL

- 223 KUKL has legal obligations to report to KVWSMB and WSTFC as provisioned in license and lease agreement. The reports included quarterly and annual operating report, annual financial report and audited financial report and annual report on the condition and operation of the service system. The type of report and the frequency of submission are shown in Table 6 below.

Table 6: Reports to be submitted by KUKL under the License and Lease Agreement

S.N.	Name of Report	Submitted to	Timeframe
	License Requirement		
1	Quarterly Operating Report	KVWSMB	Quarterly
2	Annual Operating Report	KVWSMB	Annual
3	Annual Financial Report including projected expenditure and income statements for next 2 years)	KVWSMB & WSTFC	Annual
4	Audited Financial Report	KVWSMB & WSTFC	Annual
	Asset Lease Agreement		
5	Annual Report on the condition & operation of the service system	KVWSMB	Annual

- 224 But KUKL is not preparing these operating and financial reports and submitting to KVWSMB and WSTFC as required. KVWSMB is not insisting on submission of these reports too.
- 225 KUKL prepares monthly MIS report of operational data and is shared with KVWSMB and MoUD. The reports are usually delayed by few months. KUKL prepares annual report and publishes it for distribution on its anniversary in the month of February each year. But the annual report presents the status of water supply but does not give any analysis about whether the targets set for the year has been achieved or not. The financial reports are submitted to WSTFC along with tariff revision proposal only.
- 226 Though PID and KUKL are under the KUKL board, the formal communication between them is not regular. The meetings are only held when there is problem in the field during implementation of the project. PID now is more independent and does not need to have its program approved by KUKL board.
- 227 There is no formal link of communication between KUKL and MWSD. The only forum for dissipation of information on the progress status of Melamchi project to KUKL is the periodic progress meeting at the Ministry of Urban Development.
- 228 KUKL holds frequent meeting with KVWSMB to discuss about various problems and issues. KVWSMB also meets regularly with the branch managers and capital investment projects are managed directly by KVWSMB.

5.3 Monitoring and Evaluation Systems

- 229 No monitoring system is in place in KUKL to monitor and evaluate the performance of KUKL and its various divisions and branch offices. No section has been given the responsibility to monitor whether KUKL is meeting its obligations as per license and lease agreement in attaining the service level and providing service to the customers. KUKL is not seen to be taking legal requirement under the license seriously.
- 230 KUKL also does not have the system to monitor the performance of its divisions and branch offices. The performance of branch office is generally based on the motivation of the manager who leads the branch office.
- 231 KUKL has carried out benchmark study in 2010 and established operational and management benchmark indicators for benchmark monitoring. But these benchmark indicators have not been updated and used for monitoring its operational and management performance.
- 232 KVWSMB has started frequent inspection and monitoring of KUKL facilities jointly with the staff of KUKL to evaluate the performance of services. The joint team consisting of KVWSMB board member and staff, KUKL Technical Manager and branch office staff are carrying out monitoring of KUKL facilities and offices. This practice has helped KUKL immensely in identification of critical maintenance requirements, securing funds for the same in addition to addressing some kind of consumers' needs on KUKL service, raised by NGOs and consumer group representatives in the KVWSMB Board and participating in the joint inspection team.
- 233 The practice is expected to provide first-hand information on condition of water supply facilities, and practices and help KUKL in addressing the concerns of vocal advocacy groups. At the same time, some pressure on KUKL is built up by NGO representatives and Consumer Group representatives towards the improvement of services.
- 234 However, such intensive monitoring is not sustainable or desirable, as it is substituting the role of executive management of KUKL and is thought to be result of current management crisis at KUKL.

235 The monitoring is not found to be conducted to ascertain whether the performance is as per the requirement under the license. KVWSMB has not taken any measure to sanction KUKL for non compliance.

236 WSTFC has set out few performance conditions while approving Tariff revision in 2013 and has given a timeline to fulfill it within the specified timeframe. WSTFC is monitoring the progress status of the actions. But not much progress has been made in fulfilling these conditions except publication of valve operation schedule and water quality report of water treated at major WTPs.

5.4 Present Problems

237 The monitoring of performance is difficult as there are no measured operational data. The measuring equipments or devices are either nonfunctional or there is lack of staff to carry out measurement. The performance indicators have not been fixed.

238 There is no formal system of progress reporting inside KUKL except for the capital investment project which needs reporting to the ministry and the National Planning Commission. The informal reporting systems are not effective in monitoring.

239 KUKL is not complying with legal requirement of reporting to KVWSMB and WSTFC. The asset owner, KVWSMB is unable to verify whether KUKL is conducting its business professionally as per requirement.

240 The improvement in service level has not been achieved even though lot of investment has been made for improvement and construction of water supply facilities.

241 The present problem of water supply in KV is lack of coordination between various agencies responsible for improvement of water supply service in Kathmandu valley. The lack of communication and coordination between KUKL and PID has resulted in non-use of distribution network already completed in Minbhawan, Siphel and Kusunti area.

242 Melamchi project is planned to be completed by September 2016 but there is still no official information from MWSDB to KUKL about the status of project. The assets are expected to be handed over to KUKL for operations after its commission. This will require training and involvement of operational staff from the construction/commissioning phase. But KUKL has not yet prepared itself to take over the assets of this mega project and operate and maintain it.

5.5 Analysis of Background of Present Problems

243 The measuring equipments for operational data are not functional. KUKL has not been showing much importance to acquiring these data. There is no disincentive or punishment for nonperformance.

244 There is no output based planning for capital expenditure or operational activity. Without any measurable indicators, the monitoring and evaluation of performance is difficult.

245 There is some confusion on the proper authority for development and management of water supply services in Kathmandu valley. As per WSDA Act, KVWSMB is the main agency who is responsible for water supply services in Kathmandu valley. But KVWSMB has not shown full responsibility and initiated proactive actions for improvement of water supply services in KV. It has given operating license to KUKL but has not taken adequate steps to monitor performance and give direction for improvement and apply sanctions in case of failure. KVWSMB still looks at the ministry of urban development as the authority for control of water supply sector.

- 246 KVWSMB and WSTFC have started monitoring the performance of KUKL but have not taken any punitive action so far for non compliance. The agencies do not fear about punitive action for not meeting their reporting obligations.
- 247 KUKL is a public company with private participation, which has led to the feeling that KUKL is a private company resulting in poor communication between KUKL and the related capital investment program implementation agencies.

6. CAPACITY DEVELOPMENT

6.1 Ongoing Effort for Capacity Development

248 There are some activities ongoing in KUKL for improvement of its management. The CBP team was recruited by KUKL for capacity building and support KUKL to manage the company professionally and commercially and to enable KUKL staff to manage KUKL by the end of contract period of the CBP team. But the performance of CBP team was not productive and the efficiency of the company was not improved during the time of support by the CBP team. The CBP team has completed their contract in June 2014 and has since demobilized. The development partners are now helping KUKL in capacity building of KUKL through trainings and observation visits. The main agencies supporting KUKL in capacity building are ADB and JICA.

249 A number of trainings have been conducted after establishment of the company in the areas of change management orientation, NRW and leak detection, Basic plumbing, Treatment plant operation, pump operation, valve operation, store inventory, Autocad, GIS, and hydraulic network modeling. Pro-poor water services and gender issues, water quality monitoring, WASH, training of trainers in Singapore. About four study tours have been organized for KUKL board members and the KUKL senior management. Around 6 management level engineers participated in water and wastewater trainings in Japan under the JICA Training program for government officials.

250 However, the training programs have resulted in little improvement of performance for lack of tie up with the performance evaluation or performance agreements.

6.2 Training programs (including Cambodia and Vietnam)

251 JICA organized a training and exposure visit of KUKL and MOUD staff to Phnon Pehn water Supply Authority from 2nd to 7th June 2014. The participants of the visit included Joint Secretary of MoUD, Executive Director of KVWSMB and the top management team of KUKL including Acting General Manager.

252 The visit team had prepared an action plan for improvement of water supply services in KV and has committed to implement the action plan. There has been not much progress in the implementation of action plan but KUKL is still making efforts to implement some of the action plan. The status of progress of action plan is presented in Annex 6.

253 ADB also organized a training and exposure visit to water supply and wastewater facilities in Cambodia and Vietnam for PID, KUKL and MoUD officials in 2013.

7. POST MELAMCHI SCENARIO OF WATER SUPPLY IN KATHMANDU VALLEY

7.1 Technical

- 254 The completion of Melamchi project is expected to ease the water supply problem in Kathmandu valley as it will bring in 170 million liter water per day to augment existing water supply of about 145 MLD. The availability of water per connection is expected to be more than double the present value. The design of Melamchi project envisages that the Melamchi water will be conveyed to 7 reservoirs located at various locations outside of ring road and will supply all areas within the ring road and other areas under the command of the reservoirs exclusively by Melamchi water.
- 255 The water supply scenario post Melamchi in year 2017 however does not look too encouraging based on the analysis of design principles used. The design has assumed that all areas within ring road and adjoining areas will be supplied exclusively by Melamchi water and existing sources will not be used. The assumption may hold good for 2025 scenario when there will be additional water from Yangri and Larke sources but for year 2017 scenario, this may be a problem. The total quantity of treated water available from Melamchi in 2017 will be 85 mld as the capacity of WTP is 85 mld only. This is less than the quantity of water supplied at present from existing sources in wet season and therefore will be insufficient to meet the demand and so, the improvement in supply may be unlikely.
- 256 It is therefore important that the existing sources should not be completely excluded from supplying water within the ring road area. The other reason for use of these sources for supplying the area within ring road for now is that the demand of water in upstream area is still low and therefore will not be able to use it fully. This may create a situation of water shortage in urban area and water wastage in upstream area.
- 257 The existing water treatment plants are not in good working condition and are in need of rehabilitation. In order to ensure that the quality of water from these existing WTPs are comparable to the water quality from existing sources, these need to be rehabilitated otherwise the objective to supplying improved quality water to all areas may not materialize.
- 258 The water demand in KUKL service area is estimated by KUKL to be 360 mld now and is expected to grow further in next two years, but the water supply quantity post Melamchi is expected to remain much lower than the demand. The water supply situation post Melamchi will therefore be still intermittent.
- 259 A quick review of design criteria shows that both the primary and tertiary pipeline of the new water supply system has been designed with a peak factor of 1.5. The capacity of tertiary pipeline may not be sufficient to ensure supply at design pressure. It may not be possible to maintain design pressure at the consumer taps during peak flow time even in case of 24/7 supply.
- 260 The fate of existing facilities is uncertain. The general understanding is that the existing sources will be used upstream of existing reservoirs. In such case, most of the existing water treatment plants may become redundant and may have to be abandoned.
- 261 The distribution network DMA has been designed to be fed through one point only and that is through pipe from new service reservoir. Therefore all existing tubewells and attached WTPs currently under operation will be non-functional or else will be used for emergency purpose only.

- 262 SCADA system will be used for the operational control of new WTP and major valves in the network. But alternative manual arrangement for emergencies and failures are to be proposed.
- 263 The supply area of each reservoir is clearly defined. All DMAs are isolated and have one main pipe supplying water to the area. The service connections are made from tertiary pipes only and so the operation of network will be simple.
- 264 It may be advisable to prepare a year 2017 scenario of water supply situation in Kathmandu valley based on the design principles adopted by the consultants, which will guide KUKL to prepare the operation and maintenance plan.
- 265 The training of operational staff for operation and maintenance of facilities being constructed under Melamchi project is crucial for proper operation of the project. The training of operational staff should be carried out from the construction phase itself when the project starts installing system for operation and control.
- 266 The provision in contract for WTP and tunnel construction provide for training during commissioning only for short period. The past experience in similar project shows that on the job trainings are pre-requisite for successful operation and maintenance. Based on the experience analysis of Marshyandi Hydro electricity project in Nepal, the following conclusion can be arrived at for Melamchi project.
- Training separate from the training during commissioning is needed for KUKL staff.
 - Training at site, on the job, is effective.
 - Training abroad, considering the perception in the country, needs to be regarded as reward for good work and only performing managers should be selected for training abroad on achievement of concrete result. Training abroad opportunity shall be considered as a reward for good performance.

7.2 Administrative

- 267 The boundary of area served by each service reservoir constructed under Melamchi Project and the boundary of DMA do not match with the boundary of existing branch offices. So the existing boundary of branch offices may not be appropriate after the Melamchi project bulk distribution and the new distribution network comes into operation. There will a need to reorganize the boundaries of branch offices to ensure that each branch have full control over its operation and is not dependent on other branch offices for water supply into parts of its area.
- 268 The management of production will be carried out by separate department with full responsibility of water sources, conveyance to WTPs, operation and maintenance of WTPs. The branch offices will carry out mainly commercial management.

8. THE WAY FORWARD

8.1 Organization Structure and Administrative Issues

8.1.1 KUKL and Board of Directors

- 269 KUKL needs to respond to the new environment, in which it operates under a lease agreement and an operating license; to the regulatory provisions and monitoring reporting requirements with KVWSMB, the owner of the assets. KUKL inherited the working culture from its former organization, a government statutory agency with regulatory, owner and service provider bundled altogether in one organization, where it functioned like a government corporation without explicit monitoring and reporting requirements and without any commercial orientation.
- 270 KUKL needs to change the way it does its business to match the new corporatized environment as an autonomous company with an independent professional board with the aim of achieving an efficient, effective and productive service provider.
- 271 KUKL Board is designed as an independent professional board indicated by inclusion of three independent board members; one of them nominated by ADB. An Independent Board is one which is able to act independently (professionally) from the controlling shareholder and to act in the best interest of ensuring the long term sustainability and value of the company. The board is accountable to the consumers and the general public.
- 272 The board should formulate a policy and a code of conduct. KUKL board policy and code of conduct should be prepared in line with the identified strategic objectives of the company and consist of:
- Board Process Policies: which will include Board Job Description, Agenda Planning to Achieve Board Outputs, Board Members' Conduct, Role of the Chairman, Board Committee Principles, and Board Committee Structure
 - Executive Limitations Policies: which will include constraints on executive authority that establish the prudence and ethics boundaries within which all executive activity and decisions must take place
 - Board-Executive Delegation Policies: which will include Accountability of the General Manager, Delegation to the General Manager, Monitoring the General Manager's Performance
 - Procedural Guidelines: which will include the TOR of a board member and board self-monitoring and a self-evaluation checklist.
- 273 In the present context at KUKL, where building commitment for reengineering is an immediate goal, awareness building on the role and function of boards, and KUKL governance more generally can be an important initial step so that the Board and management have appropriate guidance on designated roles. BOD orientation programs should be directed toward this goal
- 274 The second important step is to establish an executive leadership, whose qualifications have been discussed in the job description section. On appointment of the General Manager, reengineering agenda could be pursued further to include
- Amendment to lease contract and revise Service Standards – non relevance of Service Standards because of delay in MWSP completion
 - Strategy of management of scarce natural water resources and quality
 - Staff regulations
 - Performance contracts of Managers
 - Delayed internal promotion and appointments

275 The third important step is to finalize restructuring of organization structure and define responsibilities, supervision and reporting requirements for department, divisions, and branch offices under Operations departments, Engineering Department and Administration and Finance Department.

8.1.2 Proposed Organization Structure (Pre Melamchi)

276 Based on the discussions as presented in earlier chapter, the restructuring of the organization structure will be necessary to address the situation after the exit of CBP Team and problems facing KUKL. A restructuring has been proposed in the Technical side considering the assets to be managed after completion of the Melamchi Project.

277 The departments of the restructured organization have been proposed on a functional basis. The functions are: a) Water Supply Operations b) Sewerage Operations; c) Technical and Engineering; and d) Finance and Administration.

278 The Water Supply Operation department will consist of four divisions: i) Water Supply division; ii) Non Revenue water division, iii) Electro Mechanical; and iv) Tanker section. The water supply division will be responsible for water operations in Kathmandu valley and will have ten branch offices under it.

279 The Sewerage operation has been proposed as a separate department in view of the huge sewerage development works and the complex operational activities that will be necessary to manage sewerage service. It will be responsible for all management of operation and maintenance of wastewater services in Kathmandu.

280 Technical and Engineering Department will have a) Project Design and Implementation Division; b) Planning and Monitoring and c) IT and Instrumentation Unit under it. The project design and Implementation division will be responsible for all capital investment projects while Planning and Monitoring division will be responsible for planning, monitoring and report preparations. IT and Instrumentation division will be responsible for planning of all new instrumentations and implementation of IT systems in KUKL.

281 The Administration and Finance department will have two divisions; a) Administration Division and b) Finance Division. The administrative division will have 7 sections; namely General Administration, Legal, Human Resource, Training, Customer Care and Public Relations, Procurement and Central Store. The Training Unit has been added and customer care and public relation section has been strengthened.

282 The Finance Division has four sections under it; a) Central Account b) Budget and Fund, Revenue Monitoring and Project and Head Quarter Operations.

283 The Water Quality and Internal Audit are responsible for audit of water quality and the finance respectively and has been placed directly under General Manager and reports directly to General Manager.

284 The provision of separate units for the temporary projects like Gwalindaha project and Tubewell project has not been provided. It is assumed that all temporary projects will come under the purview of Engineering Department and the management staff will be filled (pulled) from the departmental pool of staff.

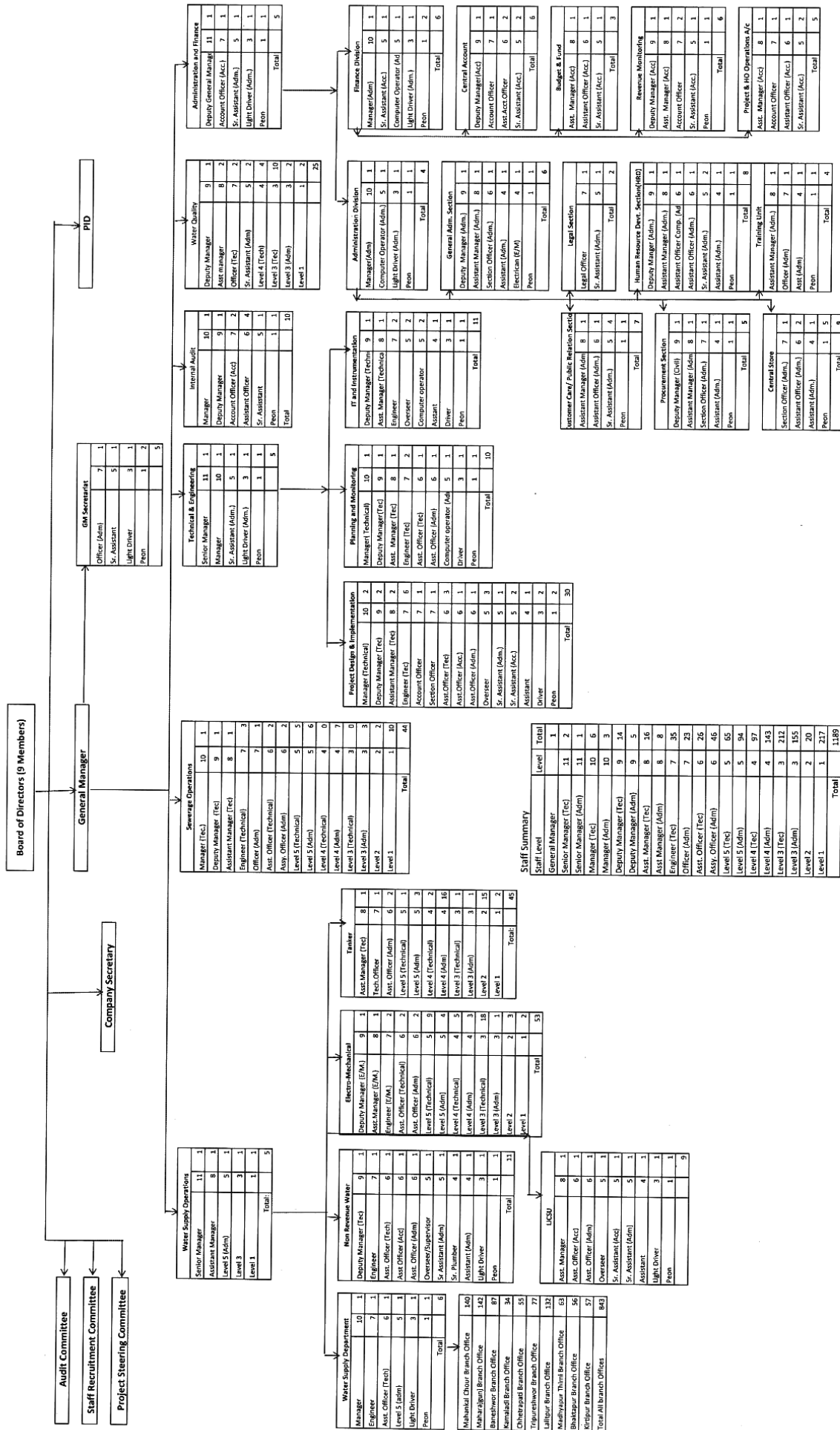
285 The proposed organization structure has been presented in Fig 5.

286 The water supply service operation consist of two major functions; i) Water Resources and Treatment (Production) and ii) Water distribution and commercial management. It is advisable to separate these

two functions at division level. This will make the engineering function of water operation more focused. But this separation has not been proposed because the separation of these two functions at division level may not be practicable before the completion of Melamchi Project due to present dependency of pockets of distribution areas on small individual production centers (tubewells) spread throughout Kathmandu Valley. It has therefore been proposed to separate the production and commercial management function at branch office level only as a transitional arrangement and so that the full separation could be done easily at a later stage after the commissioning of Melamchi project.

- 287 KUKL has adopted a new strategy in the design of DNI for Melamchi project where, each area will be supplied from one reservoir only and the present practice of supplying water from multiple reservoirs will be discontinued. The boundaries of service area of new reservoirs and DMA boundaries do not match with existing boundary of branch offices. So it will be necessary to redefine the boundary of branch offices in line with the new DMA boundaries adopted for operation of system effectively after the commissioning of Melamchi project.
- 288 However, the change of boundaries before the commissioning of Melamchi system may create more disturbances because the present water supply system does not support DMA configuration proposed for post Melamchi period. So, the retention of present branch office configurations has been proposed for pre-Melamchi period.
- 289 The reorganization has focused on strengthening of i) customer service function, ii) employees training function iii) water quality surveillance functions iv) water resources and treatment functions; iv) water works instrumentation and vi) Planning function.

Kathmandu Upatyaka Khanepani Limited
Proposed Organization Structure



Staff Summary

Staff Level	Level	Total
General Manager	1	1
Senior Manager (Tec)	11	2
Senior Manager (Adm)	11	1
Manager (Tec)	10	6
Manager (Adm)	10	3
Deputy Manager (Tec)	9	14
Deputy Manager (Adm)	9	5
Asst. Manager (Tec)	8	16
Asst. Manager (Adm)	8	8
Engineer (Tec)	7	35
Engineer (Adm)	7	23
Officer (Tec)	6	26
Officer (Adm)	6	46
Asst. Officer (Tec)	5	64
Asst. Officer (Adm)	5	95
Level 5 (Tec)	4	97
Level 5 (Adm)	4	143
Level 4 (Tec)	3	212
Level 4 (Adm)	3	155
Level 3 (Tec)	2	20
Level 3 (Adm)	2	20
Level 2	1	217
Level 1	1	1189
Total		1189

8.1.3 Proposed Staffing

- 290 The staff for each unit of the organization has been proposed based on the work load of the units. The proposal has especially looked at the technical manpower required at water treatment plants, pump stations, water quality surveillance and other operational facilities.
- 291 The total staff required for KUKL based on proposed organization has been estimated to be 1189. The total staff will consist of 493 technical staff, 479 Administrative staff and 217 unskilled staff. The staff proposed for each department, division and branch offices have been presented in Annex 7A-7E.
- 292 The staff requirement of branch offices has been calculated based on the number of water facilities under each branch and the number of staff required for operation of each facility. The number of water facilities in each branch office has been presented in Annex 8. The number of meter readers, ledger operators has been calculated on the basis of standard work load for each post.
- 293 Table 7 presents the composition of staff in terms of category and level.

Table 7: Proposed Staff Categories and Level

Staff Level	Level	Adm & Finance	Tech & Engg	Sewer Operati	Water Operati	Branch Offices	WQ/IA/HQ	Total
General Manager							1	1
Senior Manager (Technical)	11		1		1			2
Senior Manager (Adm)	11	1						1
Manager (Technical)	10		3	1	1			5
Manager (Adm)	10	2					1	3
Deputy Manager (Technical)	9	1	4	1	5	5	1	14
Deputy Manager (Adm)	9	4					1	5
Asst. Manager (Technical)	8		5	1	4	5	2	17
Asst Manager (Adm)	8	8						8
Engineer (Technical)	7		10	3	5	15	2	35
Officer (Adm)	7	9	2	1		8	3	23
Asst. Officer (Technical)	6		4	2	4	16		26
Assy. Officer (Adm)	6	10	3	2	8	19	4	46
Level 5 (Technical)	5		5	5	12	43		65
Level 5 (Adm)	5	17	7	6	12	48	4	94
Level 4 (Technical)	4	1	0	0	8	84	4	97
Level 4 (Adm)	4	5	2	7	21	108		143
Level 3 (Technical)	3		0	0	19	183	10	212
Level 3 (Adm)	3	3	5	3	6	135	3	155
Level 2	2		0	2	18	0		20
Level 1	1	15	5	10	8	174	5	217
Total		76	56	44	129	843	41	1189

8.1.4 Comparison between existing and proposed staffing

294 A comparison of proposed staffing has been done with the existing staffing in order to assess the impact of proposed changes on existing staff. The proposed total staffing is less than the approved list of staff of KUKL by 16. However there has been shift in composition of support staff with reduction in administrative staff and increase in technical staff especially in level 3, 4 and 5. The biggest change in staff category is in level 3 where the number of administrative staff is proposed to be slashed by 56 and the technical staff increased by 58.

295 Table 8 presents the comparison between the existing approved staff and the proposed staffing at various level and categories.

Table 8: Comparison between existing approved staff and proposed staff

S.No	Staff position	Category	Approved	Proposed	Difference	Remark
1	GM/MD	Adm	1	1	0	
2	Level 12 DGM	Adm	1			
3	Level 11 SM	Tec	1	2	1	
4	Level 11 SM	Adm	1	1	0	
5	Level 10	Tec	7	6	-1	
6	Level 10	Adm	3	3	0	
7	Level 9	Tec	14	14	0	
8	Level 9	Adm	6	5	-1	
9	Level 8	Tec	16	16	0	
10	Level 8	Adm	7	8	1	
11	Level 7	Tec	26	35	9	
12	Level 7	Adm	18	23	5	
13	Level 6	Tec	21	26	5	
14	Level 6	Adm	57	46	-9	
15	Level 5	Tec	44	65	21	
16	Level 5	Adm	132	94	-38	
17	Level 4	Tec	60	97	37	
18	Level 4	Adm	150	143	-7	
19	Level 3	Tec	154	212	58	
20	Level 3	Adm	211	155	-56	
21	Level 2	Tec	16	20	4	
22	Level 1	Adm	259	217	-42	
	Total		1205	1189	-16	

8.1.5 Staff Recruitment

296 Staff recruitment is the urgent necessity of KUKL. KUKL Board should put utmost urgency in recruitment of the General Manager to lead the company which will pave way for implementation of all other reorganization activities.

297 The staff recruitment has been made more urgent because most of the existing top management staff would have been retired within the next three years. This exodus of management staff will further deteriorate the management capacity of KUKL with loss of institutional memory. This will have an adverse effect on the skills, experience and knowledge base of the company

- 298 The staff regulations gives the KUKL Board the mandate to recruit top management staff like General Manager and down to the level of Deputy Managers on performance based contracting with fixed terms.
- 299 KUKL has therefore the option of recruiting the top level managers from the open market on contract basis and or by promoting the qualified existing staff at the lower level. The important thing is the change management and new management should be amenable to the new style of corporate management. So the proposal has been made to recruit at least 50% of total positions of level 11, 10 and 9 managers from the market on contract basis with the remaining may be filled up by internal promotion.
- 300 The most important thing is all management level positions need to be on performance based contract and hence the job description need to be carefully prepared so that the performance targets are well defined; and job descriptions are amenable to be included in the performance based contract.
- 301 The recruitment of Engineers and Overseers should be priority for recruitment by open competition from the market. A carefully prepared job description is a pre requisite for starting recruitment process. The old pending recruitment process in KUKL should be scrapped.
- 302 The proposed staff positions show a need to increase the number of technical staff while decreasing administrative staff. This is not expected to create problem in enforcement as the vacant positions are more than the number of positions to be dropped except at level 5. The existing excessive administrative staff may also be trained in other administrative or technical job and transfer them to new position instead of laying them off which would be more practical solution.

8.1.6 Staff Motivation

- 303 KUKL General Manager is required to play the role model of the newly emerging culture in the new organizational setup organization showing his abilities, personality and leadership in managing the challenges of performance of the organization as related to the stated mission and strategic objectives. The behavior of the top management is very important in kick starting any staff motivation measurers and should present themselves as examples. Any activity related to performance demand should start with the General Manager and the top management of KUKL.
- 304 In order to jump start motivating staff on the change management, the General Manager with support of the management team needs to explain to the staff the reasons for change, describe the benefits of the change, offer a detailed picture of the new organizational structure and its functioning, describe how the change will be managed, and provide information on human and financial resource that might be needed to support the change through meeting sessions with groups of staff; assisted by professionals in the field of change management.
- 305 In order to strengthen the participation and the break the inertia in the organization, the General Manager and the KUKL management needs to get feedback from all levels of the staff in formal or informal manners on how the change is moving ahead. The management needs to further show the some results of change; create an atmosphere, cosmetic or otherwise (say various smart uniforms for various levels of staff at work; separate for laboratory staff, for electromechanical staff, for counter staff, for plumbers; campaigns of cleaning and systemic arrangement at office and work place or physical organizing the various offices), that supports the new identity and culture and to foster towards a collaborative team approach in addressing various day to day activities.
- 306 As a first step, the responsibilities and some measurable indicators in qualitative or quantitative terms could be established at least for major departments, divisions, and branch offices. On establishment of the indicators, the management shall proceed with quarterly evaluation of department, division or

branch groups; and proceed to award all of the staff of performing units with some nominal monetary awards, which shall be graded according to evaluation.

307 In order to sustain the momentum, the KUKL management shall carryout, periodically and regularly, performance measuring, training and rewarding in support of new mission and objectives of KUKL, in a planned manner. Performance measuring is expected to identify training needs naturally. The management shall focus on showing how the new management procedures and team work will counteract the perceived loss and fear of the staff due to the changes.

Motivation at Individual Level

308 Staff motivation includes some kind of incentives directly related to the performance of the staff. However individual performance measurement immediately is not a possibility as the job descriptions and indicators of performance measurement are still to be established for each category of staff.

309 All training programs conducted shall be also a subject of evaluation and all trainees will be required to go through a test that certifies that the trainee has understood the training objectives and completed training successfully.

310 The training test can be organized in an aptitude test manner by using technology available. Usually every single question is designed in various manners. And every time of opening the test program in the computer, the questions are juggled in an unpredictable manner, and those appearing for test need to go through the question and mark the correct answer. The result is available instantly.

311 The job description and performance indicators of officer level staff shall be prioritized for implementation. The individual performance evaluation and an incentive structure will have to be worked out with due consideration of progress in revenue collection gradually. The current staff regulations allow performance evaluation at various organizational levels as groups, or areas groups and also at individual level.

312 Similarly to test the aptitude of the staff in the assigned position annually in the sphere of company procedures in fulfilling the responsibilities of that position, or the annual program of the company in that area of the functioning of the position, the knowledge of procedures and responsibility of that particular position could be tested in a similar manner as described above in a simple and transparent manner. However, the tests should focus on practical application of company rules and procedures and avoid academic content.

313 The annual performance evaluation is expected to improve gradually on implementation of the performance evaluation on the basis of the job description with performance indicators.

KUKL Staff Regulation Amendment

314 The current KUKL staff regulations are a product of evolution of various old unstructured rules of statutory bodies, which might have been borrowed from the then government corporation. The staff regulations are based more on controlling perspective rather than from a motivating perspective. It is necessary to establish new regulations reflecting the mission and strategic objectives of the company. The management of KUKL aftermath the Cambodia utility visit had also felt the need for revision in staff regulations which would have more judicious provision for reward and punishment system based on work performance. Based on the study of the staff regulation of PPWSA and the local environment in Nepal, some areas have been identified in KUKL regulation for revision which would help in developing conducive environment for developing work culture in KUKL. The areas are:

- Provision of mandatory issuance of Job description by supervising officer and with specific punitive action for non compliance,
- Establishment of fixed staff disciplinary committee with representative of employees and chiefs of department and divisions

- Probation period to be shortened to 3-6 months
- Staff Recruitment authority to be vested on management based on the quota approved by the board
- Staff Training to be followed by examination of the trainee, Only passing result to be considered for evaluation (promotion)
- Introduction of objective performance evaluation for yearly bonus or award
- Rules and regulation covering the behavior of staff in the work place and their conduct whilst involved in company business in agreement with the employees unions
- Flexibility in sub-groups requirement for promotion to higher position

KUKL Staff Union

315 The existence of five staff unions in the company is a burden and is not helping the organization. The environment should be created to hold election of the official union for the company which will have the authority to conduct collective bargaining on behalf of the staffs. A strong leadership by the General Manager will likely reduce the interference of staff unions in the management of KUKL.

8.1.7 Capacity Building

316 The previous capacity building exercise in KUKL has shown that effective implementation of capacity building programs is a challenge, with the result of previous capacity building team producing plans rather than building capacities, and almost none of plans translated into budgets, or daily operations.

317 In order to make capacity building meaningful, it is important to fulfill some prerequisites, which is likely to ensure addressing the challenge of implementation and demands initially more attention than the content of capacity building program itself. Capacity building for change involves, Change Management, a method for reducing and managing resistance to change when implementing organizational change.

318 The KUKL GM need to establish a Change Management Team of Senior Managers led by himself to execute a complex operation consisting of:

- Information dissemination on Intended change and objectives of the change; focusing on building awareness around the business reasons for change and the risk of not changing, so as to create a desire for change among the KUKL staff.
- Change promotion through active and visible participation by GM and Senior Managers and Managers throughout the change process by holding group meetings at various branch offices or divisions of KUKL and explaining the need for change and identifying individuals at Manager, Deputy Managers level and below to supervisory level for coaching in change management; holding meetings with staff unions
- Development of training requirements based on the skills, knowledge and behaviors necessary to implement the change and implementing training to target groups
- Resistance management throughout the process by identifying and understanding the expected resistance, analyzing feedback from employees, staff unions, and taking corrective action based on this feedback.

319 Any successes, small or large, must be recognized during the implementation of the change. Individual and group recognition is also a necessary component of change management in order to cement and reinforce the change in the organization. The staff regulations of KUKL allow such recognition by the General Manager. This is, no doubt, the most challenging assignment of the senior management. Obviously, the Change Management Team also needs some initial orientation on the strategy of change management.

320 In contrast, the current approach has been that the KUKL management is hopeless and it should be replaced from top to branch level, in fact pointing out that the entire KUKL management need to

be dismantled. This, somewhat unfair evaluation of replacing the entire management down to lower level, has lowered the staff morale and ignored the emotional aspect; and created the noncooperation in the change management in KUKL. The notion of branding the entire team without consideration of the organizational environment is obviously biased.

- 321 The replacement theory of Managers down to Branch Managers needs to be dispelled. A positive message need to be sent across the organization by implementing an amendment to current staff regulations provisions on recruitment of Managers and Deputy Managers, that, alternatively, performance evaluation system along with performance indicators and job description will be implemented on a priority basis for Senior Managers, Managers and Deputy Managers as examples to other levels of staff; and that performance evaluation will be carried out quarterly and necessary training will be given to Managers on the new role. However, if performance evaluation is not satisfactory within a specified period, they will be liable to punitive actions, as allowed by the staff regulations.
- 322 Another situation to avoid is the extreme defense of the past decision situations as the change management will call into question the past decisions and demand drastically different approaches. So past leaders cannot obliterate, i.e, unlearn, what they have learnt and are not suitable for top level positions of the management so that capacity development could be introduced in a new way of management.

Capacity Building Training Implementation

- 323 Training shall have to be conducted by professionals from various organizations. KUKL has some knowledge from previous training programs. The potential sources are:
- Staff College of Administration, that trains government staff
 - Limited private companies specializing organizational change and organizational development
 - Specialized private companies in occupational skills training
 - International and local consultants
 - The twining arrangement with PPWSA
- 324 The selection of the training resource group will depend on the nature and scope of the training, KUKL will identify on implementation of priority critical actions indicated in this study. The scope of training needs have been identified broadly elsewhere in the report, which need to be further worked out in detail by KUKL management in the course of reengineering of the organization to match the situation, then emerged.
- 325 The twining arrangement with PPWSA is expected to provide cost-effective capacity building of KUKL in delivering continuous improvements in its service. The twining arrangement will cover addressing core business fields of KUKL like sustainable operation and maintenance, and management of the assets. Typically three to five on-site visits can be expected from PPWSA over a period of 12 to 18 months. The area and extent of cooperation need to be worked out. JICA has been assisting through the Water Policy Advisor, Mr. Ryuji Ogata in this regard. KUKL has already made an observation tour to PPWSA recently.

8.1.8 Proposed organization structure for post Melamchi

- 326 The post Melamchi period will require KUKL to revise its organization structure for effective management of water supply services. The changes will be required in the functioning of water supply operation department. A new division, Water Production division is proposed to be formed to work under water supply operation department. The new division will be responsible for water sources, water treatment and all other facilities upto the service reservoir. The new structure of water supply operations has been presented in the Annex 9. The new water production division will have Melamchi section, Kathmandu Valley Section and Electro Mechanical Section under it.

- 327 The Water Supply Division will be modeled into water distribution and Commercial Services Division which will have the branch offices and the Tanker Section under it.

8.1.9 Branch Office Reorganization

- 328 The branch offices are proposed to be reorganized and its boundary redefined. The branch offices will be reorganized based on the catchment of service reservoirs and the boundary of DMAs. The number of branches may be 9-10. The responsibility of branch offices will be basically commercial services including distribution activities.

8.2 Monitoring and Reporting Systems

8.2.1 Internal to KUKL

Reporting to General Manager, Departments and Divisions by Branch Offices

- 329 Normally, the Technical Department would have organized monitoring of (i) water produced, water sold, NRW, waste water collected and treated;(ii) energy and chemical consumptions; (iii) operation of the storage tanks; (iv) pressure at which water is delivered at critical points of the distribution system; (v) overflows of sewers; (vi) drinking water quality at production and distribution points; and (vii) effluent quality through a MIS reporting, a computer based system that gathers data, creates responses to defined requirements and distributes the results to management on a regular basis in order to assist them in decision making and guiding the company. This kind of measuring and reporting has not been institutionalized.
- 330 It is anticipated that MIS reporting on daily basis will be established initially with as much as possible data on the functioning of daily water supply operations and extent of adherence to water supply schedule by email, in every morning and evening, to see what was accomplished every day by Branch offices.
- 331 The water supply division on receiving the information from various branches will consolidate the reports and report to the Technical department and the GM. The daily data will be further processed by the Division to summarized monthly information with comments of the Division. The information will be through emails till an integrated information system is established.
- 332 In the financial sector, KUKL Financial Division under the Administration Department is expected to establish modern billing and accounting systems software, management accounting to maintain accurate and timely accounting records. The communication will be through WAN so that records are available at head office in real time basis, and could be monitored and reported for management decisions and actions in a timely manner. This measure may take some time to establish as procurement of the software and training of staff will take some time.
- 333 Similarly, Human Resources Section of the Administration Department is expected to establish and update staff deployment status regularly and provide information for management response and decisions.
- 334 Further, it is expected that with some initial flow of data, weekly meetings of branch offices would be held at head office with the top management and meetings will get more and more meaningful in due course of time as some monitoring will be in place to replace the current situation of no information. In case of noncompliance of reporting, the management will be able to take necessary punitive measures.
- 335 The email will be the main channel of data reporting till WAN is established in KUKL.

336 It is important to note that operationalization of all monitoring and reporting is highly dependent on staff recruitment and deployment. The quality of monitoring and reporting is expected of nominal value at the beginning, expected to improve with more training in place.

8.2.2 External to KUKL

337 KUKL needs to comply with reporting requirements to KVWSMB and WSTFC. It is expected that KUKL will establish the operational reporting system immediately on completion of staff recruitment and deployment of staff at critical positions.

338 It is expected that as reengineering gets ground, the agenda planning and regular meetings of KUKL with KVWSMB and WSTFC will take place regularly with reports providing more factual data and agenda for the meetings.

339 A Coordination Committee is proposed under the chairmanship of KVWSMB to monitor and coordinate the activities of KUKL, PID and MWSDB. The committee will meet quarterly and report and discuss the progress of works in each agency and agree on remedial measures to be taken if delays in progress are reported.

8.3 Technical and Operational Issues

340 KUKL has not been able to prepare and implement plans and programs for its various functions even after seven years of its formation. Though the plan and program documents have been prepared by CBP team and some documents have been prepared by earlier consultants, KUKL have not been able to review and approve the documents for implementation. KUKL should show more importance to these planning, program and policy documents and should make decisions for approval. These documents will form the basis for further annual plans and programs for improvement of services. In order to facilitate decision making, KUKL should form a management committee comprising of top managers and this committee should make review of the draft policy documents and finalize it and recommend KUKL board for approval.

341 In case of some documents, some refinement may be necessary with further study. In such cases, KUKL should hire the consultant for revising the document. But KUKL should not rely on the consultant only for the plan and policy matter. It is the decision of KUKL and KUKL management and KUKL board should be accountable for it.

342 The present state of lack of coordination between KUKL, PID and MWSDB should be improved. The water supply plan for Kathmandu Valley should be one document covering all water supply activities (projects) ongoing in the valley. AS KVWSMB is the agency responsible for water supply service in the valley, it should take the lead in preparing the water supply plan with the help from KUKL and monitor its implementation. This would also ensure that the delay from one agency does not create problem for the other and there is coordination and the benefit of capital investment reaches the people in time.

343 The present design of water supply system for Melamchi Project considers using Melamchi water exclusively for all areas within ring road and to use existing sources for other areas upstream of service reservoir. But this design consideration may not match with demand situation immediately post Melamchi. KUKL and PID should prepare a detailed water supply scenario for water supply situation in 2017 (post Melamchi) and make arrangements to ensure that available water could be supplied to the consumers in an efficient manner and people can take full benefit of it. It should also ensure that existing facilities are used to a maximum extent and the existing tubewells and WTPs are not abandoned.

- 344 Melamchi Project has proposed complete renewal of distribution network and is implementing for installation of a new distribution network not connected to existing system. The existing system is proposed to be abandoned after the project. But the transfer from old system to new system will be a great challenge. The new system will not be fully operational by the time of completion of Melamchi project. The new pipeline may still require to be tested and fittings installed. So there may be a long time lag between the completion of Melamchi Project and supply of water from new distribution network system. KUKL and PID should coordinate and prepare a strategy for operational change over from the existing system to the new system.
- 345 The training of operators for operation of Melamchi Project including water treatment plant, intake and tunnel should start from construction phase itself when the controlling and operational instrumentations are being installed in order to ensure that the operator has full knowledge about the system. So MWSDB and KUKL should coordinate to have the prospective operators from KUKL to be deputed to the project for training.

8.4 Areas of Improvement for Financial Strengthening

- 346 KUKL is a commercial company and its survival is based on financial sustainability. The strategy of KUKL should be to sell more water at volumetric rate to consumers consuming more than minimum quantity. The average water available for consumption per connection is about 10.7 m³ per month and so most connections pay minimum charge because the supply is just enough for that. The provision of new connections to new customers will reduce the average consumption further and further reduce revenue instead of increasing. In this situation of supply, the tariff strategy should focus on the reduction of minimum consumption from present 10m³ to say 8 m³ for minimum charge without raising the tariff rate. This would have significant impact on revenue increase by converting some of the used amount to volumetric tariff band of Rs 32 per m³ from the minimum band of Rs 10 per m³.
- 347 The most profitable band of tariff is to supply water to big consumers. KUKL should allocate a fixed quantity of water to be supplied to big consumers for generation of good revenue. Though there will be more pressure from the public and the government to focus supply to small consumers as a social cause, KUKL should develop a strategy of distributing about 10% of water supply amount to big consumers which would generate about 7 times more revenue than supplying same water to minimum domestic users.
- 348 KUKL has stopped giving connections of more than ½ inch size to its customers and as a result big consumers have sought alternative source of water. KUKL should reverse this strategy and encourage big connections for commercial viability, especially after completion of Melamchi Project.
- 349 Though about 92.3% of all connections are metered, most connections have meter removed due to low supply condition. The present supply situation shows that the area upstream of reservoir has highest consumption due to high availability of water. KUKL should focus on proper metering of all connections in such areas. The performance based incentives could be started in these areas in the field of metering and meter reading.
- 350 KUKL should produce maximum water from existing water sources as the additional cost required for water treatment and distribution will be minimal. The existing water sources have high flows during wet season; KUKL should tap maximum water for supply. KUKL should not constrain itself from using pumping during dry season and the operating budget for electricity should not be constraint for operating pumps for water production. Pharping water supply system may be one example where more water could be supplied by operating pumps in wet season.
- 351 The operation and maintenance cost of isolated tubewells and water treatment plants directly connected to distribution system is very high in term of water produced per unit volume. This is due

to limited use of the facility during supply hour only. As these plants are expected to be nonfunctional after the completion of Melamchi project, the construction of these facilities in new places should be decided with due consideration of its use in future.

- 352 The management of arrears is a great challenge. Though KUKL had started action to disconnect water supply service to defaulters about 2 years back, it did not gain momentum. KUKL has brought out programs to waive penalty on default amount several time to encourage them to pay. But the arrear still remain high. KUKL should issue letter to individual defaulter to pay the charge or face disconnection with specific timeline given for disconnection. In case of continued default, it should disconnect the service to the consumer.

9. ACTION PLANS FOR IMPROVEMENT

353 An action plan has been prepared for improvement of the services of KUKL in line with the suggestions as outlined above. The actions are short term and medium term and prioritized by time frame.

Table 9: Action Plan for Institutional Capacity Development of KUKL

S.N	Action/Activity	Time Frame	Responsibility
Organizational and Administrative			
1	Complete Recruitment of GM based on performance based contract and delegation of full authority	September 2015	KUKL Board
2	Appointment of two independent directors of KUKL board and complete formation of full board	October 2015	Experts/KUKL Board member
3	Orientation of KUKL Board by various management and corporate board experts and Senior Board members	October 2015	Experts/KUKL Board member
4	Prepare and adopt Board Policy and Code of conduct	December 2015	KUKL Board/Consultant
5	Finalize and Approve KUKL re-organization proposal and Pre Melamchi organization structure	December 2015	KUKL Board
6	Establish periodic reporting on status of progress of KUKL performance to BOD on a quarterly basis	Starting January 2016 continuous	GM and management team
7	Define the responsibilities, monitoring, supervision and reporting requirements of various departments, divisions, and units	December 2015	GM (KUKL Board)
8	Prepare job description of Chiefs of Departments, Divisions, and Branch offices to include supervision and reporting requirements with parameters and frequency	December 2015	HRD Division /Consultant
9	Prepare job description for all positions of KUKL staff	July 2016	KUKL/Consultants
10	Decide on proportion of management positions to be filled by staff promotion and by contract (At least 50% of management staff of Level 11, 10 and 9 to be recruited by open competition & rest by internal promotion)	October 2015	KUKL Board/GM
11	Prepare TOR and draft contract for top managers for performance based contract	November 2015	HRD Division/ Consultants
12	Start process for internal promotion of management staff for vacant posts and appoint management staff with performance related job description	November 2015-January 2016	HRD Division
13	Publish public notice for recruitment of managerial positions and recruit managerial staff on performance based contract	December 2015-February 2016	KUKL HRD
14	Appoint staff for all lead positions in each of the Departments, Divisions, units	February 2016	KUKL HRD
15	Publish public notice for recruitment of Engineers and Overseers and recruit by open Competition (based on current vacancy)	September 2015 –December 2015	KUKL HRD
16	Recruit technical staffs of level 3, 4 and 5 by open competition (based on current vacancy)	September 2015 –December 2015	KUKL HRD
17	Recruit all staff as per requirement of approved organization chart by open competition and staff promotion	February 2016 – December 2016	KUKL management

18	Review KUKL staff regulation and prepare amendments to staff regulation in consultation with employee representatives	September 2015 - November 2015	KUKL HRD
19	Approve amendment to KUKL staff regulation by KUKL board	December 2015	KUKL Board/GM
20	Develop and Implement performance based staff evaluation for Management staff	January 2016 onward continuous	GM
21	Develop and Implement performance based staff evaluation for Support staff	July 2016 onward continuous	KUKL Management
22	Redefine boundary of branch office for post Melamchi period	March 2016 – April 2016	Operations Department
23	Prepare for changes to be made while redefining branch office boundary (e.g. meter reading codes and others as required)	April 2016 – July 2016	Operation Department
24	Finalize plan, program and policy documents for all activities of KUKL (as required by KUKL license also) by management with support of local consultants as required (Consultants to be hired for the purpose)	October 2015 – July 2016	KUKL management Team/Consultants
25	Approve plan, program and policy documents for all activities of KUKL	October 2015 – July 2017	KUKL Board
26	Establish Change management team led by GM with senior managers and carryout change management information dissemination and orientation activities	December 2015 – February 2016	GM
27	Establish and fully staff training unit in KUKL	September 2015	GM/HRD
28	Prepare a staff training plan for entire KUKL including Board members, managers and support staff	January 2016 – March 2016	HRD/consultant
29	Implement staff training plan	April 2016 onwards	KUKL
Technical			
30	Install/Repair measuring equipments at all production and distribution centers and start keeping record of all measurements and sending it to higher authorities for MIS data.	September 2015 – December 2015	Branch Offices
31	Complete 100% metering of all connections in good supply areas especially supplied through transmission mains	September 2015 – March 2016	Branch Offices
32	Prepare strategy and plans for implementation of SCADA system in KUKL	January 2016 – January 2017	Planning Division
33	Form a monitoring committee under KVWSMB for coordination of activities between KUKL, PID and MWSDB and meet quarterly	October 2015 and continuous	KVWSMB
34	KUKL and PID to prepare water supply service scenario post Melamchi (year 2017) to ensure utilization of existing sources and treatment facilities	September 2015 – December 2015	PID and KUKL
35	KUKL and PID to prepare change over strategy from existing system to new system under construction by PID	January 2016	PID and KUKL
36	MWSDB to prepare plans for on the job training of operational staff and induct KUKL operational staff for training	December 2015	MWSDB/KUKL
Financial			
37	Prepare new Water tariff with focus on reducing volume for minimum charge reduced (may be 8 cum for minimum charge)	Next tariff proposal	Finance Department
38	KUKL to develop policy for supply to big consumers with focus on commercial viability of utility	January 2016 – July 2016	Finance Department
39	Focus on maximum production of water from existing sources, not restricted by lack of budget for operation, like electricity	September 2015	Branch Offices

40	Issue letter to defaulters of water bill and start disconnecting the service	September 2015	Branch Offices
41	Complete installation of Billing and accounting software in all branch offices and start operation of computerized billing and accounting system	March 2016	Finance Department
Others			
42	Review KUKL license and Asset Lease Agreement and agree on amendments to these documents mostly necessitated due to major delay in implementation of Melamchi Project	March 2016 – July 2016	KUKL/KVWSMB
43	Hold monthly evaluation of Departments, Divisions and Branch Offices	September 2015 onward	GM
44	Prepare Quarterly operating report, annual financial report and annual condition and operation report of the service system as required under lease and license	December 2016 onward	Planning Division

354 Based on the activities as identified above for the institutional capacity development of KUKL, the broad potential areas have been identified for external assistance and presented in Annex 10.

10. CONCLUSIONS

- 355 The present management capacity of KUKL is very low with more less than 50% of top management positions lying vacant. The General Manager has not been appointed for a very long period. It is in dire need of leadership and the recruitment of General Manager and the management team is very urgent.
- 356 The lack of technical manpower at supporting level is a major problem facing KUKL. The water facilities lacked operators for operating WTPs, Pump Stations, Tubewells etc. So the staff requirement as reassessed during the study needs to be recruited for smooth and efficient operations of plants.
- 357 One of the main problems in water supply sector has been lack of monitoring. KUKL has not issued job description to its staff for it to monitor and evaluate the performance of the staff. This lack of performance evaluation has led to a culture of non performance.
- 358 The institutional arrangement has placed monitoring responsibility on KVWSMB and WSTFC. But these agencies have started monitoring just recently. There is no action taken for non-compliance of legal requirements. As a result there is lack of commitment to meet the performance requirement.
- 359 The coordination between KUKL, PID and MWSDDB is crucial for improvement of water supply situation, especially for the post Melamchi period. The lack of coordination may result in great problem in commissioning and operation and maintenance of the facilities and may result in little change in the service standard provided to the consumers.
- 360 KUKL License is not a static document which cannot be changed. KVWSMB, as the owner of assets and the issuer of license, should take initiative to amend the license and asset lease agreement so that all issues including non-compliance issues, punitive issues and financial issues (Lease Fee) could be addressed properly.
- 361 Early completion of Melamchi Project is crucial for improvement of water service in Kathmandu Valley. In the meantime, KUKL should make effort to extract and supply more water from in-valley sources atleast during the wet season. The facilities constructed under ongoing projects should be brought into use as early as possible and should not wait until completion of Melamchi Project.
- 362 The water available for sale with KUKL is small and almost fixed at present. The distribution of new connections is likely to reduce (instead of increase) the revenue. KUKL may need financial support/ subsidy from KVWSMB/GON till the additional water from Melamchi project becomes available.

ANNEX-1

List of Reports and Documents Collected and Reviewed

S.N.	Title	Date	Author/Agency
1	Facilities Data Base and Appendices	Jun - 2013	CBP Team
2	Water Resource Reports	May - 2011	CBP Team
3	KUKL GIS System	Mar - 2013	CBP Team
4	Operational and Maintenance Manual	Jun - 2013	CBP Team
5	Standard Operating Procedures	Jun - 2013	CBP Team
6	KUKL Connection Policy	2011	CBP Team
7	KUKL Business Plan 2012 - 2016	2012	CBP Team
8	Inventory Management System	2012	CBP Team
9	Computerized Maintenance Management	2012	CBP Team
10	Emergency Response Plan	May - 2013	CBP Team
11	Energy Management Plan	Jun - 2013	CBP Team
12	Information System Strategy	May - 2011	CBP Team
13	KUKL Procurement Policy	Aug - 2012	CBP Team
14	Revenue Improvement Plan	Aug - 2011	CBP Team
15	Laboratory Upgrade Plan	Apr - 2011	CBP Team
16	Maintenance Management Program	Jun - 2013	CBP Team
17	Network Extension Policy	2012	CBP Team
18	Propose NRW Strategy Plan	Mar - 2011	CBP Team
19	Occupational Health and Safety Program	2012	CBP Team
20	Program for Repair and Replacement of Meters	2012	CBP Team
21	LICSU Plan	Nov - 2011	CBP Team
22	Training and Development Program for 2012-14	Dec - 2011	CBP Team
23	Strategic Public Information Program	Jul - 2011	CBP Team
24	Tanker Service Plan	Jun - 2011	CBP Team
25	Asset Lease Agreement between KVWSMB and KUKL	Feb - 2008	KUKL
26	KUKL License issued by KVWSMB	Feb - 2008	KVWSMB
27	KUKL Annual Report, Seventh Anniversary	Feb - 2015	KUKL
28	KUKL Annual Report, Fifth Anniversary	Feb - 2012	KUKL
29	KUKL at a Glance, Fourth Anniversary	Feb - 2011	KUKL
30	KUKL at a Glance, Third Anniversary	Feb - 2010	KUKL
31	KUKL Annual Report	Jul - 2009	KUKL
32	Corporate Documents of KUKL	2007	KUKL
33	KUKL Personnel Regulation	2008	KUKL
34	Basic Design Study Report on the Project for Improvement of Kathmandu Water Supply Facilities in the Kingdom of Nepal	Oct - 2001	JICA
35	Basic Design Study Report on the Project for Kathmandu Water Supply Facility Improvement in the Kingdom of Nepal	Jul - 1991	JICA

36	Capital Investment and Asset management Program	Feb - 2010	GHD in association with ICON
37	White Paper on Kathmandu Valley water supply	2012	MOUD
38	Water Supply Management Board Act, 2063	2006	GON
39	Study of Need Assessment of KUKL	2013	Tamrakar and Honda
40	Employee Terms and Conditions Of Phnom Penh Water Supply Authority	2012	PPWSA
41	Third Country Learning Visit to Cambodia	June - 2014	KUKL Team
42	Roadmap of the KUKL Improvement	Oct - 2014	MOUD
43	Sharing the Reform Process, Learning from PPWSA	2010	Binayak Das et al
44	Indicators, Water and Wastewater Utilities	May 1996	IBRD, World Bank
45	Characteristics Of Well performing Public Water Utilities	May 2006	Aldo Baietti et al, WB
46	WSTFC Annual Report 2013/14	2014	WSTFC
47	Design Report, KUKL	DNI	PID
48	Benchmarking Performance, Urban Water Sector in South Asia	May 2006	The Water and Sanitation Program
49	Accountability and Incentives for Improving Performance in Urban Water Supply and Sanitation in India		Meera Mehta and Dinesh Mehta
50	Water Supply of Phnom Penh: An Example of Good Governance	2014	Asit k. Biswasa; Cecilia Tortajadab
51	Twinning Utilities for Better Services		Asian Development Bank Brochure
52	Official Websites of KUKL, MWSDB and KVWSMB	Various	Concerned Agency

ANNEX- 2

List of Surface Water Sources and Tubewells

S.No.	Existing Surface sources	Discharge in use		Average Flow to Service Reservoir (Estimated) in	
		Wet Season (MLD)	Wet Season (MLD)	Wet Season (MLD)	Wet Season (MLD)
Tri Bhim Dhara System					
1	Alley	2.2	0.6		
2	Boude	2.6	0.7		
3	Bhandare	2.8	0.7		
4	Chhahare	0.8	0.3		
5	Panchmane	1.7	0.7		
Total		10.1	3.0	6.0	0.0
Bir Dhara System					
6	Shivapuri	21.4	5.2		
7	Bishnumati	4.0	1.4		
Total		25.4	6.6	25.4	1.5
Sundarijal System					
8	Sundarijal (Nagmati and Syalmati)	24.0	7.2		
9	Bagmati (Boksidaha)	26.0	20.0		
Total		50.0	27.2	32.0	14.0
Kirtipur System					
10	Doodhpokhari	2.5	1.5		
11	Luhnkot	0.5	0.3		
12	Simjhwa Hiti	1.0	1.0		
Total		4.0	2.8	2.0	1.5
Pharping System					
13	Seshnarayan	3.0	2.0		
14	Satmul	8.5	4.5		
15	Kutorimul	6.5	3.6		
Total		18.0	10.1	18.0	10.1
Chapagaun System					
16	Muldol	2.8	1.8		
17	Charghare	1.6	1.6		
18	Basuki	2.5	0.5		
19	Devki	0.5	0.2		
20	Naldu	2.5	2.5		
Total		9.9	6.6	9.9	6.6
Bhaktapur System					
21	Mahadev Khola	4.0	2.5	4.0	2.5

S.No.	Existing Surface sources	Discharge in use		Average Flow to Service Reservoir (Estimated) in	
		Wet Season (MLD)	Wet Season (MLD)	Wet Season (MLD)	Wet Season (MLD)
Manohara System					
22	Manohara Infiltration Gallery-1	6.5	2.5		
23	Manohara Infiltration Gallery-2	2.0	2.0		
Total		8.5	4.5	6.0	0.0
Sump Wells					
24	Bagmati sump well	0.0	0.5		
25	Gokarna sump well	0.0	0.5		
Total		0.0	1.0	25.4	1.5
Nakhu					
26	Nakhu Khola	3.0	2.0	3.0	2.0
Local Pharping					
27	Dallu	0.5	0.3		
28	Hitidol	0.8	0.3		
29	Chalnakhel Springs	0.2	0.1		
Total		1.5	0.7	1.5	0.7
Sankhu					
30	Lapsiphedi spring	1.0	0.5		
31	Old Sankhu source	0.5	0.3		
Total		1.5	0.8	1.5	0.8
Tokha					
32	Tokha Springs	0.5	0.3	0.5	0.3
33	Gaundi spring				
Dhungedhara & Dug well					
34	Iku Hiti	0.1	0.05	0.1	0.05
35	Shipardi Dug wells	1.0	0.5	1.0	0.5
Total production		137.5	68.6	104.9	41.5

Ground Water Sources - KUKL Tube Wells and their Status

S.No.	Name of the well/well field	Year of Construction	Yield (MLD)		Feeding to	Remarks
			Wet	Dry		
Mahankal Chaur Branch Office						
Dhobi Khola well field						
1	DK1	1984	-	-	NW, abandoned	Collapsed
2	DK2	1984	-	-	NW, abandoned	Collapsed
3	DK3	1984	0.300	0.304	Local supply	
4	DK4	1984	-	-	NW, abandoned	Collapsed
5	DK5	1984	-	0.76	Mahankal chaur	
Dhobi Khola well field						
6	GK1	1983	-	1.44	Consumed Locally	
7	GK2	1985	-	1.20	Consumed Locally	
8	GK3	1985	-	0.72	Consumed Locally	
9	GK4	1984	-	-	NW Abandoned	Collapsed

S.No.	Name of the well/well field	Year of Construction	Yield (MLD)		Feeding to	Remarks
			Wet	Dry		
10	GK5	1984	-	-	NW Abandoned	Collapsed
Manohara well field						
11	MH1	1984	-	-	NW Abandoned	
12	MH2	1984	-	-	NW Abandoned	
13	MH3	1984	0.29	0.72	Local Supply	
14	MH4	1985	0.58	1.44	Local Supply	
15	MH5	1985	0.5	1.26	Local Supply	
16	MH6	1985	0.34	0.84	Local Supply	
17	MH7	1985	-	-	NW	No discharge
18	Shankar park	2001	0.76	1.08	Local Supply	
Tripureshwar Branch Office						
19	Kalimati	1996	-	-	NW	
20	Kuleshwar	1999	0.28	0.28	Local Supply	
21	Lagan Tole	1999	0.28	0.28	Local Supply	
22	Kalanki (Shipradi)	2000	0.3	0.3	Local Supply	
23	Tahachal (MC Colege)	2001	0.43	0.43	Local Supply	
24	Tripureshwar	2002	0.25	0.25	Local Supply	
25	Sundarighat well (Solar)	1998			NW	
26	Siuchatar Well				Local Supply	
Baneshwor Branch Office						
27	Sina Mangal	2000	0.36	0.36	Local Supply	
28	Airport	2008	0.58	0.58	Local Supply	
29	Min Bhawan OT compound	2012			Min Bhawan OT	
30	Koteshwor	2008			Local supply	
31	Singha Durbar compound	2012			Local supply	Not yet in operation, Electricity line incomplete
Chhetrapati Branch Office						
32	Sitapaila	1998	0.1	0.1	Local Supply	
33	Ikhapokhari	2008			Local Supply	
34	Damaichaghat, Kankeshwari	2008	1.2	1.2	Local Supply	
Maharajgunj Branch Office						
Bansbari well field						
35	BB0	1972	0.31	0.8	Bansbari WTP	
36	BB1	1984/1997 rehab	-	0.38	Bansbari WTP	
37	BB2	1984/2001 rehab	0.48	0.96	Bansbari WTP	
38	BB3	1984/2005	0.48	0.76	Local Supply & Bansbari WTP	
39	BB4	1985/2004	0.48	0.76	Local Supply & Bansbari WTP	
40	BB5	1984/2005	0.72	1.1	Local Supply & Bansbari WTP	
41	BB6	1984/1999	0.2	0.2	Local Supply & Bansbari WTP	

S.No.	Name of the well/well field	Year of Construction	Yield (MLD)		Feeding to	Remarks
			Wet	Dry		
42	BB7	1985/2004	0.6	0.96	Local Supply & Bansbari WTP	
43	BB8	1984	-	-	NW	
44	BB9	1997	-	0.2	Local Supply & Bansbari WTP	
45	Bansbari WTP compound	2005	-	0.3	Bansbari WTP	
Mahadev Khola well field						
46	MK1	1998	0.58	0.58	Balaju WTP & Local Supply	
47	MK2	1999	-	-	NW Abandoned	
48	MK3	2000	1.25	1.25	Balaju WTP & Local Supply	
49	MK4	2000	1.54	1.51	Balaju WTP & Local Supply	
50	MK5	2000	-	-	NW	
Other Individual Wells						
51	Baniyatar (BT1)	2000	0.29	0.58	Local supply	
52	Mahadevtar (BT2)	2004			NW	
53	Chakrapath	1999	-	-	NW	
54	Samudayik (Bus Park)	2005	0.54	0.96	Local supply	
55	Pig Farming	2006			NW	
56	Baluwapati (BT3)	2005	0.54	0.96	Local Supply	
57	Maharajgunj Office Compound	2005	-	0.96	Maharajgunj Reservoir	
58	Sangle Khola	2005/2012			Balaju WTP & Local Supply	Not yet operational
59	Ratna Park	2001	0.67	0.67	Local Supply	
60	Presidents Office	2012			Local Supply	Not yet operational
61	Prime Minister's Quarter	2012			Local Supply	Not yet operational
Lalitpur Branch Office						
Pharping well field						
62	PH1	1976/1997	-	0.96	Saibu Reservoir	
63	PH2	1977	-	0.96	Saibu Reservoir	
64	Jwagal	2002	0.29	0.29	Local supply	
65	Balkumari	2005	0.86	0.86	Local supply	
66	Satdobato	2012			Local supply	
67	Saibhu Sanokhokana				Local supply	
68	Ministers Quarter	2012			Local supply	Not yet operated but ready for operation

S.No.	Name of the well/well field	Year of Construction	Yield (MLD)		Feeding to	Remarks
			Wet	Dry		
Madhyapur-Thimi Branch Office						
Bode well field						
69	BH1	1984/2012			Bode WTP	
70	BH2	1976			Bode WTP	
71	BH3	1985	1.2	1.2	Bode WTP	
72	BH4	1985	1.2	1.2	Bode WTP	
73	Dug-well site	2006			Bode WTP	
74	Tigni Reservoir Compound	1995			Bode WTP/NW	New well under construction
75	Bode WTP Compound	2006	1.2	1.2	Bode WTP	
76	Lokanthali 1	1997	0.72	0.72	Local Supply	
77	Lokanthali 2	2000	-	-	NW	
78	Jadibudi JICA well	1990	-	-	NW	
Bhaktapur Branch						
79	Bansbari	1995	-	0.29	Bhaktapur WTP	
80	Jagati Well	2000	0.29	0.29	Local Supply	
81	Jhaukhel area	2010			Local Supply	
82	Katunge	2012			Katunge Reservoir	
Kirtipur Branch						
83	Tyangla Phant	2008			Tyangla WTP	
Total of individual wells						
Total of tube wells						

ANNEX-3

Kathmandu Upatyaka Khanepani Limited

Staff Status of Each Position

S.N.	Position	Category	Group	Level	Approved	Permanent	Vacant	Contract	Daily Wages	Remarks
1	General Manager/Managing Director				1	0	1			
2	Deputy General Manager				1	0	1			
3	Senior Manager	Tec	Tec	11	1	1	0			
4	Senior Manager	Adm	Adm	11	1	0	1			
5	Manager	Tec	Tec	10	7	3	4			
6	Manager	Adm	Adm	10	3	0	3			
7	Deputy Manager	Tec	Civ	9	12	7	5			
8	Deputy Manager	Adm	Adm	9	3	1	2			
9	Deputy Manager	Adm	Acc	9	3	2	1			
10	Deputy Manager	Tec	Qua	9	1	1	0			
11	Deputy Manager	Tec	E/M	9	1	0	1			
12	Assistant Manager	Tec	Civ	8	14	7	7			
13	Assistant Manager	Tec	E/M	8	1	0	1			
14	Assistant Manager	Adm	Adm	8	4	2	2			
15	Assistant Manager	Adm	Acc	8	3	1	2			
16	Assistant Manager	Tec	Qua	8	1	0	1			
17	Engineer	Tec	Civ	7	14	7	7			
18	Engineer	Tec	E/M	7	1	1	0			
19	Microbiologist	Tec	Qua	7	1	0	1			
20	Technical Officer	Tec	Civ	7	5	3	2			
21	Technical Officer	Tec	E/M	7	3	2	1			
22	Administrative Officer	Adm	Adm	7	7	6	1			
23	Account Officer	Adm	Acc	7	11	10	1			
24	Chemist	Tec	Qua	7	1	1	0			
25	Computer Officer	Tec	Com	7	1	0	1			
26	Asst. Technical Officer	Tec	Civ	6	12	11	1			
27	Asst. Technical Officer	Tec	E/M	6	5	3	2			
28	Asst. Technical Officer	Tec	Qua	6	1	1	0			
29	Plant Officer	Tec	Qua	6	3	3	0			
30	Asst. Administrative Officer (Com)	Adm	Com	6	2	1	1			
31	Asst. Account Officer	Adm	Acc	6	30	21	9			
32	Asst. Administrative Officer	Adm	Adm	6	24	20	4			
33	Asst. Legal Officer	Adm	Leg	6	1	1	0			
34	Chief Driver	Adm	Adm	5	0	0	0			
35	Overseer/Supervisor	Tec	Civ	5	28	13	15			
36	Overseer/Supervisor	Tec	Arc	5	1	0	1	1		
37	Asst. Plant Superintendent	Tec	Qua		1	0	1			

S.N.	Position	Category	Group	Level	Approved	Permanent	Vacant	Contract	Daily Wages	Remarks
38	Oversee/Supervisor	Tec	E/M		11	11	0			
39	Senior Assistant Administrative	Adm	Adm	5	50	45	5	1		
40	Senior Account Assistant	Adm	Acc	5	66	52	14			
41	Senior Computer Operator	Adm	Com	5	7	7	0			
42	Senior Lab Technician	Tec	Qua	5	2	1	1			
43	Senior Legal Assistant	Adm	Leg	5	1	0	1			
44	Heavy Equipment Driver	Adm	Adm	5	8	5	3			
45	Overseer (GIS)	Tec	GIS	5	1	0	1			
46	Pump Operator	Tec	E/M	4	15	11	4			
47	Computer Operator	Adm	Adm	4	6	4	2			
48	Plant Operator	Tec	Qua	4	8	7	1			
49	Machine Operator	Tec	E/M	4	3	3	0			
50	Meter Mechanics	Tec	E/M	4	5	5	0			
51	Senior Mechanics	Tec	E/M	4	1	1	0			
52	Lab Technician	Tec	Qua	4	2	1	1			
53	Tap Inspector	Tec	Civ	4	6	5	1	1	1	
54	Assistant Administration	Adm	Adm	4	50	37	13	1	2	
55	Assistant Account	Adm	Acc	4	42	28	14	1		
56	Senior Meter Reader	Adm	Adm	4	35	32	3			
57	Senior Plumber	Tec	Civ	4	16	15	1			
58	Electrician	Tec	E/M	4	4	4	0			
59	Heavy Driver	Adm	Adm	4	17	13	4			
60	Light Driver	Adm	Adm	3	33	19	14		1	
61	Asst. Pump Operator	Tec	E/M	3	108	96	12			
62	Plant Attendant	Tec	Qua	3	1	1	0			
63	Junior Plumber	Tec	Civ	3	31	22	9			
64	Meter Reader	Adm	Adm	3	80	48	32	2	3	
65	Lab Boy	Tec	Qua	3	2	0	2		3	
66	Junior Assistant	Adm	Adm	3	98	53	45	1		
67	Sampler	Tec	Qua	3	2	1	1			
68	Junior Mechanics	Tec	E/M	3	7	7	0			
69	Junior Electrician	Tec	E/M	3	3	2	1			
70	Helper	Tec	E/M	2	16	10	6	3	6	
71	Valve Operator	Tec	Civ	1	74	18	56	34	121	
72	Watchman	Adm	Secu	1	81	53	28	6	42	
73	Sweeper	Adm	Secu	1	16	12	4		6	
74	Peon	Adm	Secu	1	74	19	22	5	23	
75	Labour	Tec	Civ	1	47	37	10		16	
	Other (Labour 11, Level 1 5)				0	0	0		16	
	Total:				1205	814	391	56	240	1110

Source: KUKL Administration Division

ANNEX-4

Translated Copy of Job Description of Technical Department Chief of KUKL

JOB DESCRIPTION (Sample)

TECHNICAL DEPARTMENT CHIEF

1. Ensure effective implementation of daily routine works carried out by all branch offices under the water Distribution Division related to water production and distribution inside the valley
2. Control, instruct and monitor works related to water production and distribution at time of outside office hours and night time
3. Ensure equitable distribution of water considering the gap between demand and supply by arranging meetings of branch offices from time to time
4. Change Water supply schedule from time to time in consultation with Branch offices
5. Prepare and submit capital investment program for the various branches/units under the Division
6. Ensure implementation of the approved programs by the branch offices/units under the Division, control and monitor implementation
7. Solve through discussions/consultation problems encountered during daily routine works of Branch Offices
8. Prepare, recommend and submit action plan for effective implementation of water production, treatment and distribution
9. Inspect from time to time physical infrastructure related to water production, treatment and distribution and ensure necessary maintenance works to maintain the assets in current state
10. Ensure water quality testing from time to time, ensure mitigation of any identified water quality problems and recommend measures to establish a water quality laboratory with modern facilities
11. Ensure immediate implementation of leak control/maintenance works on high priority basis through the Branch Offices
12. Control, instruct and inspect and ensure inspection at site of technical works like implementation of consumer connection works, change of consumer connection point, and pipeline maintenance works
13. Ensure preparation of annual program of Wastewater Division and submit for approval
14. Ensure wastewater pipeline works and related maintenance works re implemented in a timely and effective manner inside the Valley
15. Control, Instruct and supervise routine works carried out by Wastewater Division
16. Control, Instruct and Supervise routine works carried out by Electromechanical Section
17. Ensure necessary works are carried out so that all tubewells are in operational condition during the dry season by taking special interest in the current functioning condition of pumps installed in deep tubewells for water production, necessary maintenance works, and procurement of necessary new pumps
18. Ensure appropriate use of vehicles and equipment of the company and submit use policy for approval, if needed.
19. Control, Instruct and Supervise routine works carried out by Tanker section
20. Ensure good operational condition of tankers so that they are operational, more so in dry season

21. Ensure distribution of water by operating effective tanker service in dry areas
22. Control, Instruct and supervise works of Tubewell Project and Gwalindaha Project
23. Ensure carrying out of studies and design of new projects for implementation under the responsibility of Planning Division
24. Ensure effective functioning of Information Technology Unit
25. Mobilize/utilize available resources to the maximum extent taking into account the current financial condition of the company and focus on cost cutting measures
26. Recommend rewards to staff, who have accomplished their duties honestly, timely and in a disciplined manner
27. Submit suggestions to the Chief Executive on strengthening of the Company as appropriate
28. Mobilize monitoring teams for analysis of works carried out by the Department
29. Provide compulsorily job description of key staff of the Department
30. Review progress of the Divisions and units of the Department; and submit analysis and suggestions to the Executive Chief
31. Carry out additional tasks as instructed by the Executive Chief from time to time

ANNEX-5

KUKL Income and Expenditure for last 3 years

KATHMANDU UPATYAKA KHANEPANI LIMITED
 Accrual Base Budget for the Fiscal year 2014/15 (2071/072)

S.No.	Revenue Heads		Revenue			Expenditure Heads			Expenditure			Rs. "000"	
			2013/14		2014/15	2012/13		2013/14		2014/15	2013/14		2014/15
			Actual	Approved	Revised	Projected	Revised	Approved	Revised	Approved	Revised	Projected	
01	Private Metered Connections	272870	484453	473562	479060	01	Salary	190441	230482	222233	278578		
02	Private Non-Metered Connections	74295	99537	105215	104130	02	Allowances	23403	41857	39267	46710		
03	Govt. Metered Connections	21730	26743	26357	25586	03	Over-Time	8539	10660	10560	9545		
04	Govt. Non-Metered Connections	9233	16039	13552	11960	04	T.A.D.A	0	0	0	0		
05	Public Stand Posts	0	0	0	0	05	Leave Salary	10580	14361	12532	15641		
06	Sewerage Charge	110595	187825	178462	182750	07	Insurance	463	3481	2831	1538		
07	Water Sale	30865	35000	49545	52500	08	Gratuity	49612	60000	60000	30000		
	Total Water & Sewerage Bill	519588	849597	846693	855986	09	Medical Allowance	11231	14817	13923	22254		
	Rebate (-)	7294	15743	11166	11805	10	Dress Allowance	6716	6796	6456	7310		
	Net water/sewerage Revenue (Sale)	512294	833854	835527	844181	34	Training & Research	306	1000	500	15500		
09	Penalty	25538	27015	33273	34735		Total 1	301291	383454	368302	427075		
10	Maintenance Charge	1357	1275	3315	3265	11	Pump & Machinery Repair	4430	12735	6195	6420		
11	New connection Charge	9791	9968	10980	10225	12	Chemicals (Including Laboratory)	8501	16590	14310	16115		
12	Miscellaneous	14628	2378	10138	10150	13	Fuel for Vehicles	30277	35515	29940	33590		
13	Store Sales	1505			0	14	Fuel For Others	93	350	245	405		
14	Interest Earned	8366	6070	7395	6100	15	Electricity (Power)	70177	89100	75010	93870		
	Total Other Income	61185	46706	65101	64475	35 s	System Maintenance	32345	57050	42125	46650		
						35 v	System Maintenance (Wages)	37876	48500	44705	47922		
							Total 2	183699	259840	212530	244972		
						16	Vehicle & Equipment Maintenance	6431	9650	7770	6695		
						17	Building Maintenance	993	4900	3815	3050		
						20	Audit Fees	0	1000	1000	500		
						21	Printing & Stationary	6786	11630	9390	10300		
						22	Advertisement	2527	2500	1800	2000		
						23	News Papers	145	320	277	295		
						24	Service	7665	11306	9805	10315		
						25	House Rent	2284	2511	2745	2835		
						26 A	Board Expenses	1414	1800	1800	1500		
						26 B	Board Sub Committee Expenses	2312	2200	6500	1500		
						27	Contingency Expenses	2869	10030	3825	8375		
						29	Incidental Expenses	0	0	0	80		
						33	Perishable goods	2147	3495	3170	2890		
							Dry Season	0	10000	0	0		
							Total 3	35573	71342	51897	50335		
							License Fee	15959	17715	17715	17715		
							Lease Fee Part A	20707	33984	33868	34239		
							Tariff Commission Fee	5177	8496	8467	8560		
							Assets Lease Fee Part B	118707	120000	120000	135000		
							Interest	1947	1947	2847	2847		
							Total 4	162497	182142	182897	198361		
							Total Expenditure	683060	896778	815626	920743		
							Total Income	573479	880560	900628	908656		

ANNEX-6

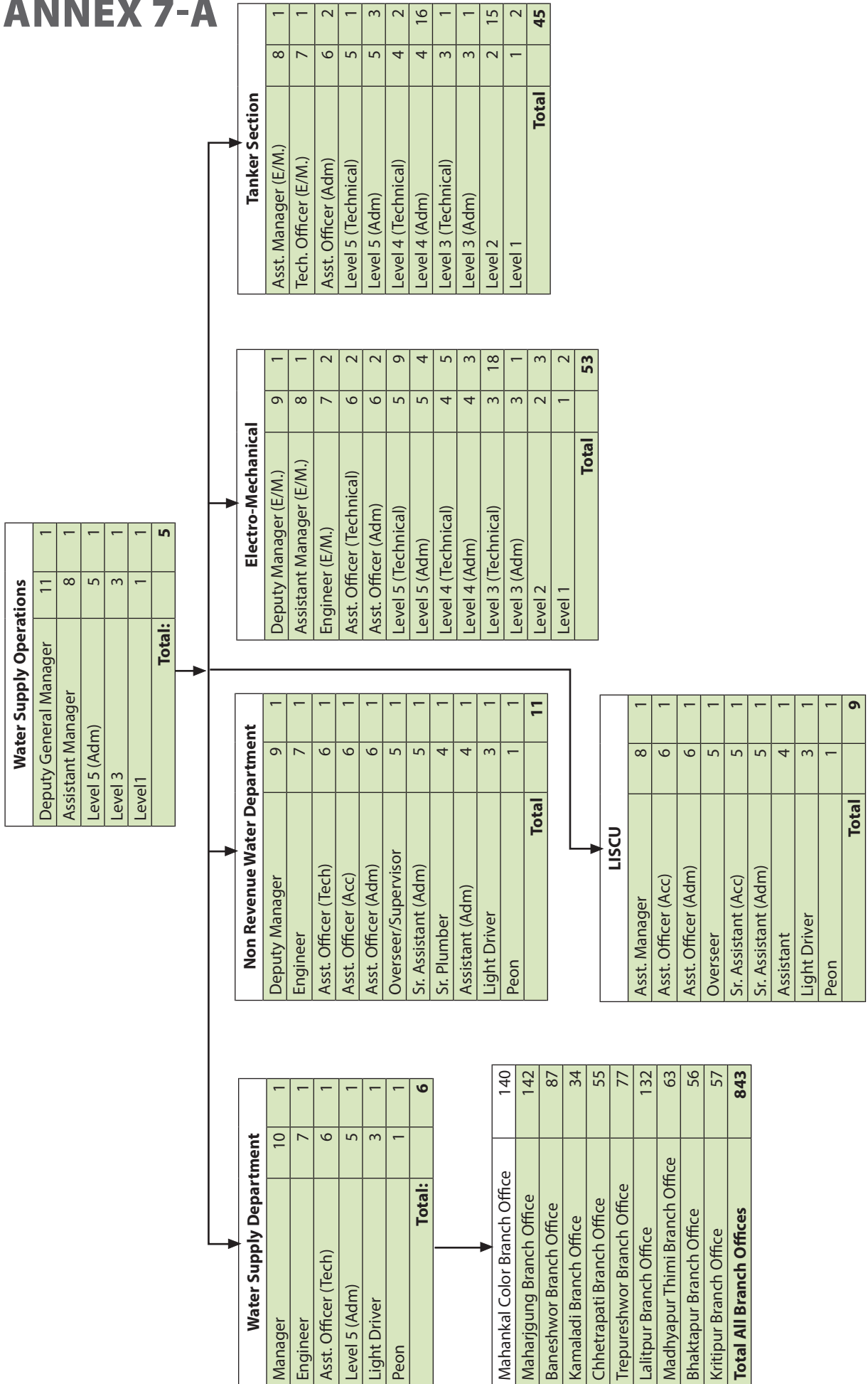
Training and exposure visit to Phnon Pehn water supply Authority

Status of Progress of Recommended Action Plan

S.No.	Description	Activities	Time Frame	Responsible	Present Status
1	Update Staff Regulation and Job Description	PPWSA document will be taken as a reference document Customized version of PPWSA will be applied Reward and Punishment system will be included and implemented strictly	3 months	Administration Department KUKL	Job Description of Department Chiefs prepared
2	Update KUKL Vision and Roadmap	Rewrite its vision and roadmap with the help of local consultants and the PPWSA to improve its hardware and software capacity of KUKL	3 months	GM KUKL	Not done
3	Amendment of tariff structure by KUKL	Administrative cost of a lump sum amount will be levied. Tariff will be based on the actual cost Industrial and commercial tariff will be distinguished and applied KUKL will be supported by the PPWSA.	9 Months	Finance Departments of KUKL	Not done
4	NRW reduction using DMA approach	One pilot project will be started in one of the areas of Kathmandu using DMA approach Target to achieve NRW reduction from 40 % to 15 %	1 Year	Technical and Finance Departments of KUKL	Not done
5	Development of Internal training system	Establishment of an in house training unit With the help of PPWSA a detail training plan will be developed Training for all. Basic to higher skills. In house to academic. With the help of JICA a detail comprehensive training plan will be developed and implemented under the Technical Cooperation	1 to 5 Years	GM KUKL	In-house training unit established
6	Development of Key Performance Indicators (KPIs)	With the help of PPWSA, KUKL will develop and adopt some KPIs KVWSMB will finalized the KPIs	3 months	KUKL KVWSMB	Not done

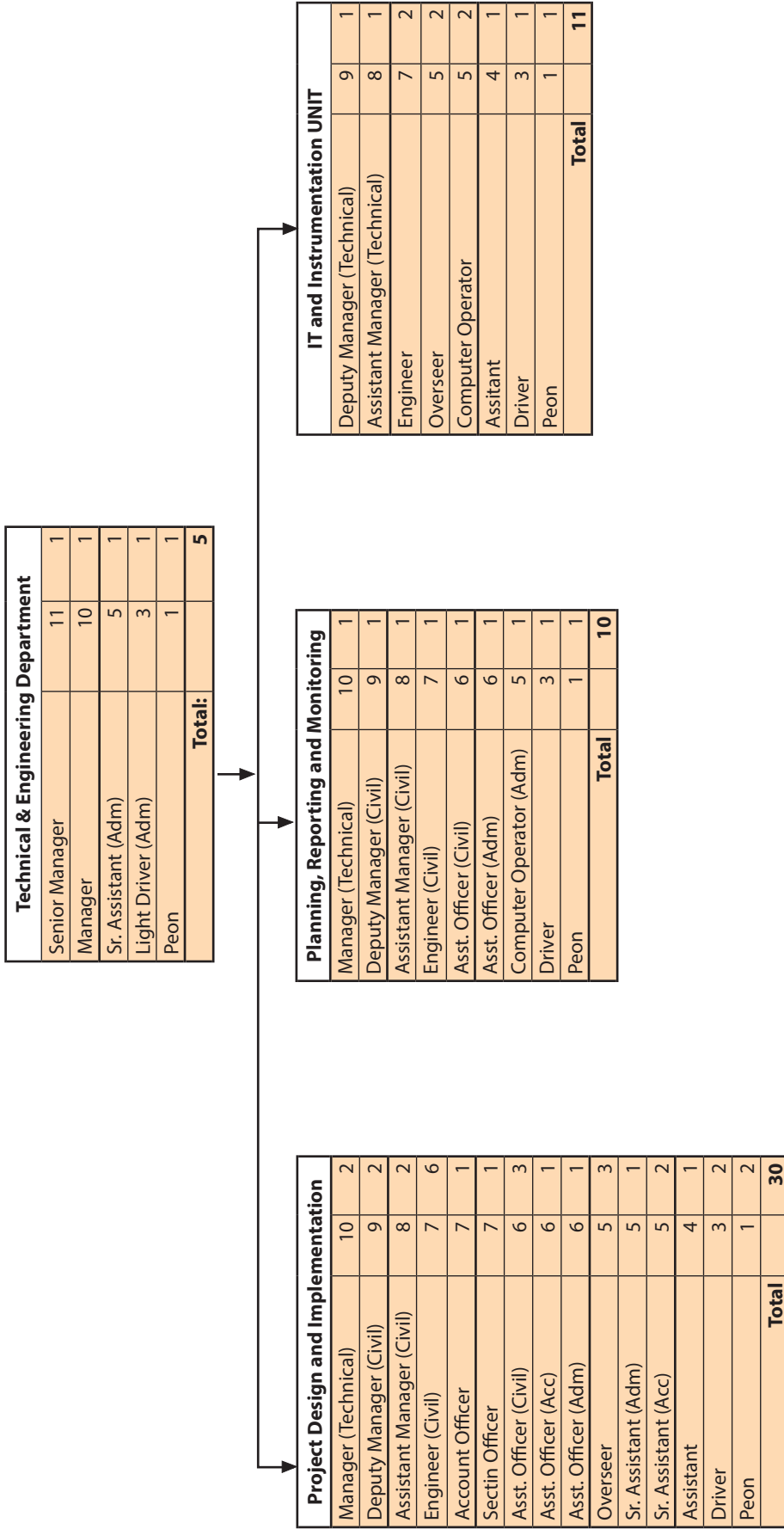
ANNEX 7-A

Proposed Staff for Water Supply Operation



ANNEX 7-B

Proposed Staff for Technical and Engineering Department



ANNEX 7-C

Proposed Staff for Administration and Finance Department

Adminstration and Finance		
Deputy General Manager	11	1
Account Office (Acc)	7	1
Sr. Assistant (Adm)	5	1
Light Driver (Adm)	3	1
Peon	1	1
Total:		5

Adminstration Division		
Manager (Adm.)	10	1
Computer Operator (Adm.)	5	1
Light Driver (Adm.)	3	1
Peon	1	1
Total:		4

General Adm. Section		
Deputy Manager (Adm.)	9	1
Assistant Manager (Adm.)	8	1
Secton Officer (Adm.)	6	1
Assistant (Adm.)	4	1
Electrician (E/M.)	4	1
Peon	1	1
Total:		6

Legal Section		
Leagal Officer	7	1
Sr. Assistant (Adm.)	5	1
Total:		2

Human Reource Devt. Section (HRD)		
Deputy Manager (Adm.)	9	1
Assistant Manager (Adm.)	8	1
Assistant Officer Comp. (Adm.)	6	1
Assistant Officer (Adm.)	4	1
Sr. Assistant (Adm.)	5	2
Assistant (Adm.)	5	1
Peon	1	1
Total:		8

Training Unit		
Assistant Manager (Adm.)	8	1
Officer (Adm.)	7	1
Assistant (Adm.)	4	1
Peon	1	1
Total:		4

Customer Care/Public Relation Section		
Assistant Manager (Adm.)	8	1
Assistant Officer (Adm.)	6	1
Sr. Assistant (Adm.)	5	4
Peon	1	1
Total:		7

Procurement Section		
Deputy Manager (Civil)	9	1
Assistant Manager (Adm.)	8	1
Secton Officer (Adm.)	7	1
Assistant (Adm.)	4	1
Peon	1	1
Total:		5

Central Store		
Secton Officer (Adm.)	7	1
Assistant Officer (Adm.)	6	2
Assistant (Adm.)	4	1
Peon	1	5
Total:		9

Finance Division		
Manager (Adm.)	10	1
Sr. Assistant (Acc.)	5	1
Computer Operator (Adm.)	5	1
Light Driver (Adm.)	3	1
Peon	1	2
Total:		6

Central Account		
Deputy Manager (Acc.)	9	1
Account Officer	7	1
Assitant Account Officer	6	2
Sr. Assistant (Acc.)	5	2
Total:		6

Budget & Fund		
Assistant Manager (Acc.)	8	1
Account Officer (Acc.)	6	1
Sr. Assistant (Acc.)	5	1
Total:		3

Revenue Monitoring		
Deputy Manager (Acc.)	9	1
Assistant Manager (Acc.)	8	1
Account Officer	7	2
Sr. Assistant (Acc.)	5	1
Peon	1	1
Total:		6

Project & HO Operations A/C		
Assistant Manager (Acc.)	8	1
Account Officer	7	1
Assistant Officer (Acc.)	6	1
Sr. Assistant (Acc.)	5	2
Total:		5

ANNEX 7-D

Proposed Staff for Other Units under GM

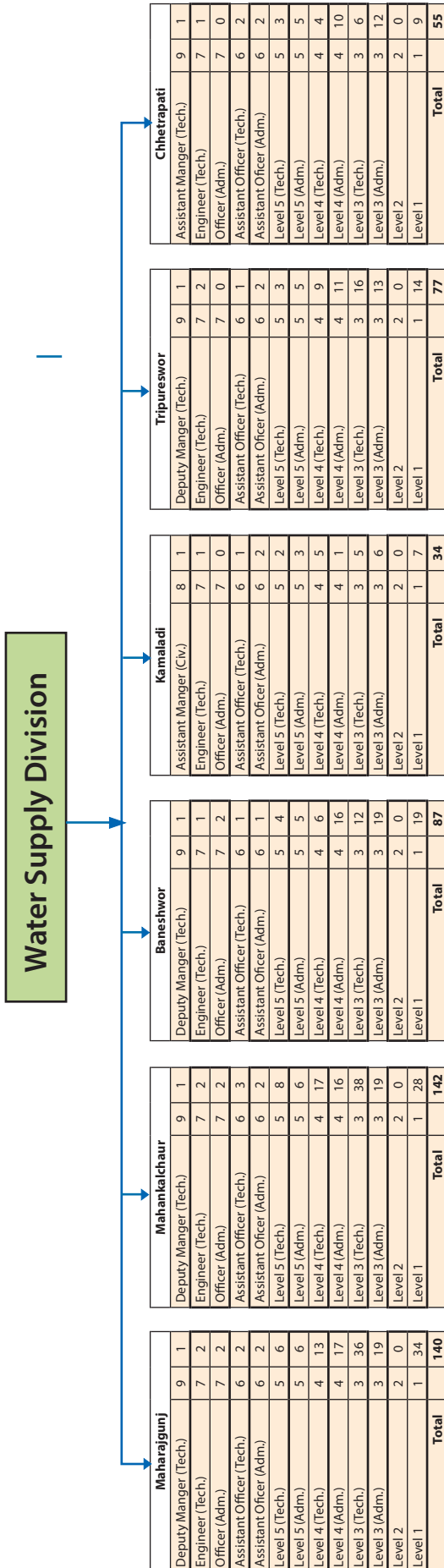
GM Secretariat	
General Manager	1
Officer (Adm.)	7
Sr. Assistant	5
Light Driver	3
Peon	1
Total	6

Internal Audit	
Manager	10
Deputy Manager	9
Account Officer (Acc.)	7
Assistant Officer	6
Sr. Assistant	5
Peon	1
Total	10

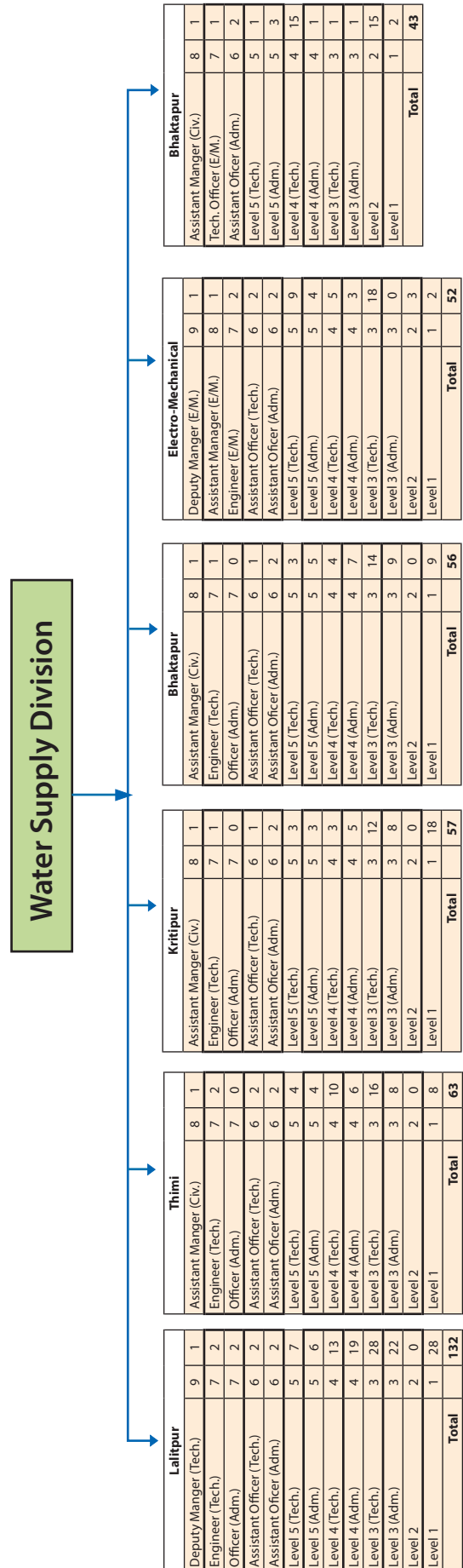
Water Quality	
Deputy Manager	9
Assistant Manager	8
Officer (Acc.)	7
Sr. Assistant	5
Level 4 (Tech.)	4
Level 3 (Tech.)	3
Level 3 (Adm.)	3
Level 1	1
Total	25

ANNEX 7-E

Kthmandu Upatyaka Khanepani Limited Branch Wise Organization Structure



Kthmandu Upatyaka Khanepani Limited Branch Wise Organization Structure

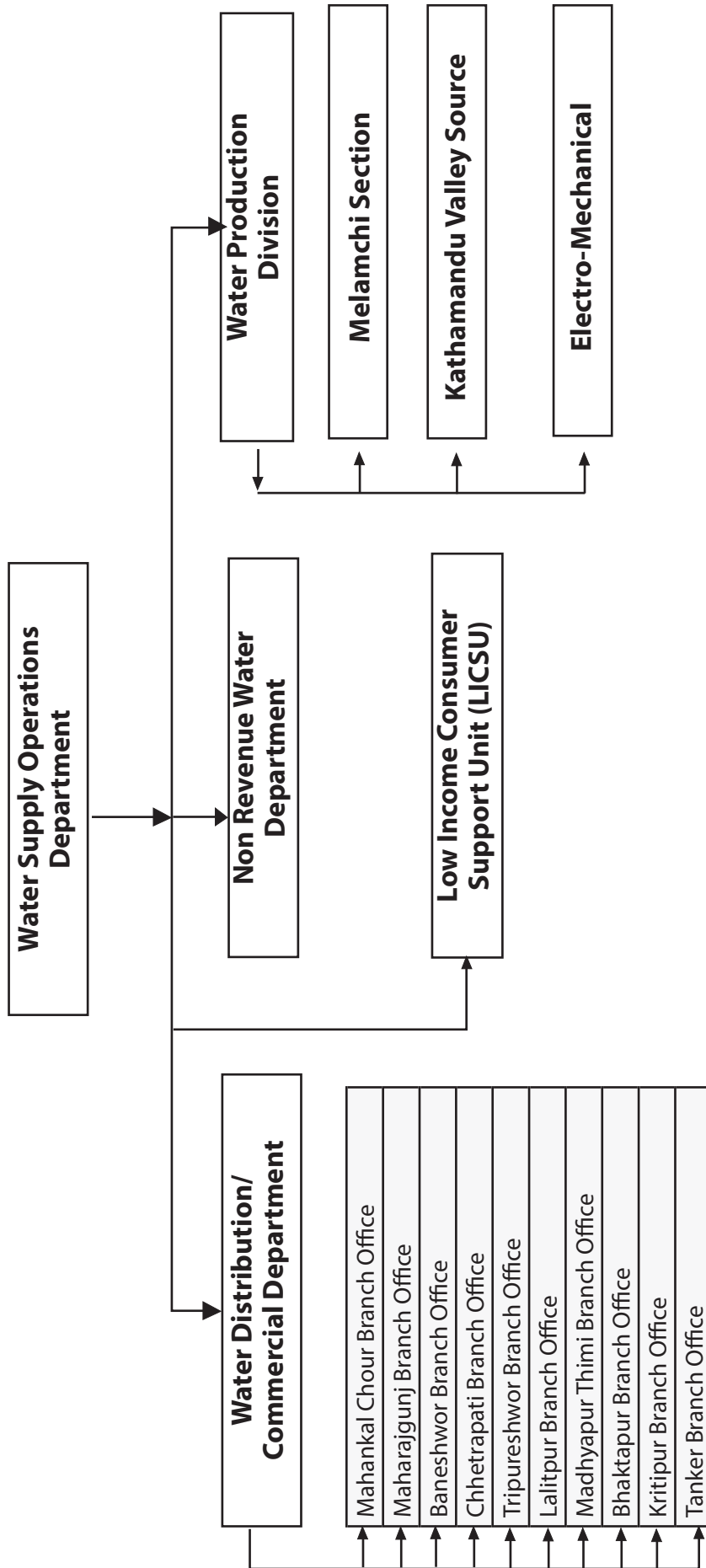


ANNEX-8**List of Water Facilities under Various Branch Offices**

Branch Office	Surface Sources	Tubewell	Small WTP	Large WTP	Reservoir	Pumping Stations
Mahankal Chour	6	10	2	2	3	6
Maharajgunj	9	16	3	1	5	4
Tripureshwor	2	5	5	1	5	5
Chhetrapati		3	1		0	
Baneshwor		5	2		1	2
Kamaladi		0	0		1	
Lalitpur	12	7	3	1	3	8
Bhaktapur	1	4	1	1	2	
Madhyapur Thimi	2	8	1	1	1	2
Kirtipur	3	1	0		3	2
Total	35	59	18	7	24	29

ANNEX-9

Proposed Organization Structure of Water Supply Department Post Melamchi



ANNEX-10

External Assistance Areas

The following areas have been broadly identified for potential external assistance for institutional capacity development of KUKL.

S.No.	Area of Activity	Mode of Assistance	Target group/Target
1	Public utility Regulation /license monitoring / effectiveness of regulation and monitoring	Workshops and orientation programs	GoN, WSTFC KVWSMB
2	Preparation of Code of conduct and Board Policy including process policies, executive delegation & limitation policies and procedural guidelines and conduct orientation/training	Implementation support/ Workshops / orientation programs	KUKL board, KVWSMB board, Executive chiefs of KUKL and KVWSMB
3	Design and Implementation of change management initiatives / performance initiatives at KUKL organizational units level Defining responsibilities, monitoring, supervision and reporting requirements of various departments, divisions, and units of KUKL and Prepare job description of Chiefs of Departments, Divisions, and Branch offices and Prepare job description for all staff positions of KUKL	Implementation assistance	KUKL organizational units / KUKL management / Staffs
4	Designing a performance based management staff contract Preparation of TOR and draft Contract for top managers for performance based contract	Implementation assistance	KUKL management
5	Review of KUKL staff regulation and prepare necessary amendments to make it performance oriented Develop and support implement performance based staff evaluation for management as well as other staffs	Implementation Assistance	KUKL management/ Staff

6.	Review existing staff training plans and prepare and implement a staff training plan for entire KUKL with focus on on-the-Job Training and Twinning Arrangement with a good water utility operator like PPWSA for capacity building with provision of support in development of policies and procedures in all aspects of institutional management.	Implementation Assistance with Twinning arrangement	KUKL Management
7	Introduction of “self-learning by doing” and Sharing Japanese management with Kaizen and 5S (Seiri, Seiton, Seiso, Seiketsu, and Shitsuke) concepts from Japanese utilities and consultants	Implementation Assistance/ Workshops in Kathmandu and abroad	KUKL Management/ branch Managers/ Organizational Units
8	Support KUKL in revising and finalizing plan, program, policy and strategy documents for all main functions of KUKL	Implementation Assistance	KUKL Management
9	Support KVWSMB/KUKL in preparing strategy for operational changeover from the existing water supply system to new system and implementing it.	Implementation Assistance	KVWSMB/ KUKL

