

Water and Sanitation Agency

Rawalpindi Development Authority

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MD/WASA/005/103

05 May, 2015

NOTIFICATION

The Competent Authority is pleased to endorse and notify Action Plan prepared by WASA Rawalpindi on the subject as per DLI5.

Directorate of Planning will be responsible directorate to monitor and implement the action plan and its activities in coordination with other departments of WASA.

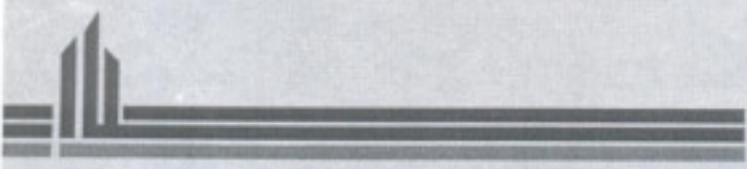
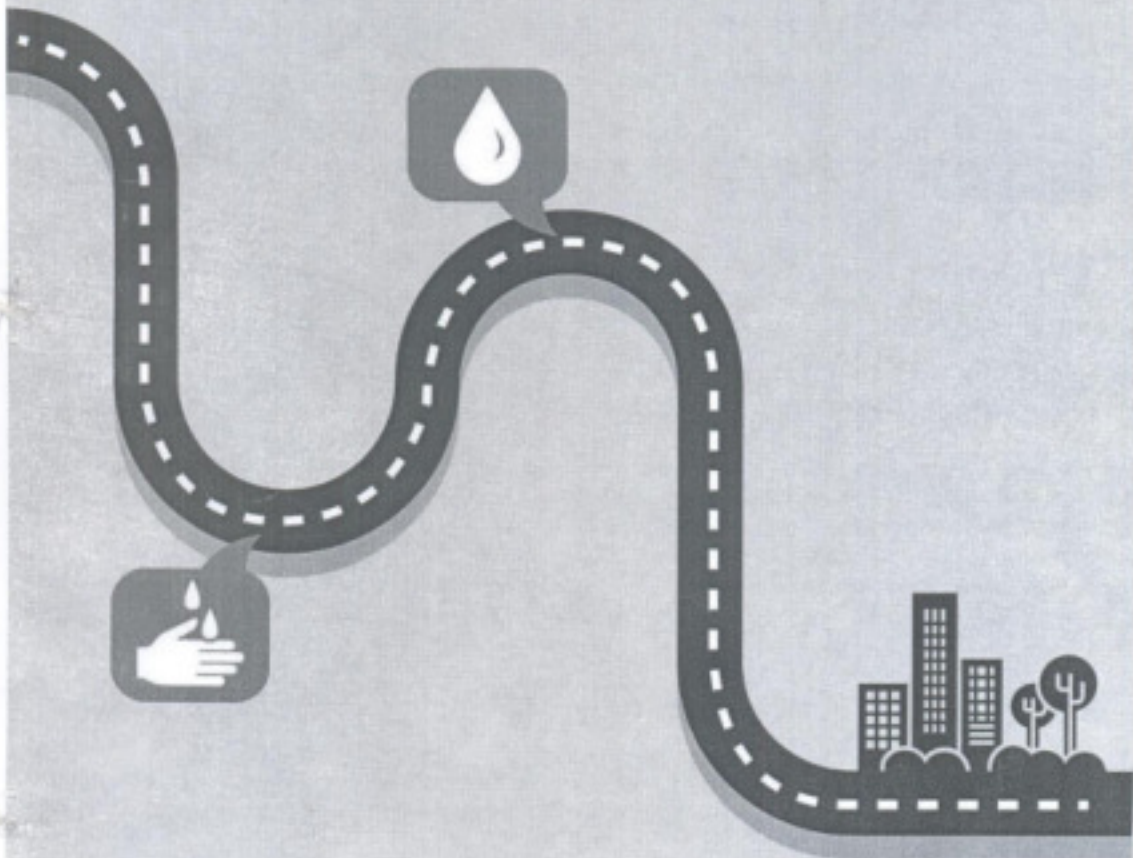


Raja Shaukat Mehmood
Managing Director, WASA

Copy to -

1. The Urban Unit
2. All WASA Concerned staff
3. Office File.

Action Plan for Phased Extension of WASAs' Services in Cities as per City Boundary



THE URBAN UNIT
UNIVERSITY OF UTAH SYSTEM OF COLLEGES
Public Urban Centers



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NOTIFICATION & ENFORCEMENT

The Government of the Punjab with support from the World Bank has been implementing Punjab Cities Governance Improvement Program of about \$154 Million. The project is a budgetary support to the Five Large Cities namely Faisalabad, Gujranwala, Lahore, Multan and Rawalpindi and includes yearly disbursements on set targets called as Disbursement Linked Indicators (DLIs). The CDGs and WASAs are sharing the finances under this Project.

The Project has seven Disbursement Linked Indicators (DLIs) out of which 'Boundary Alignment' is one, which supports a unified city boundary for each of the five cities and its entities. Introduction of an integrated spatial planning, development and asset management will required to be carried out along the same boundary.

Under this target, each of the WASAs has to develop an action plan for aligning its service area with the City Boundary/Peri Urban Boundary, which means that a detailed time-bound action plan with activities, resources and notified level of service indicators will be prepared for existing and extension areas.

This Document:

This document has been developed as a Draft Action Plan for phased extension of WASA Service Area to the notified City Boundary of Rawalpindi City.

Notification:

This Action Plan has to be notified by the Managing Director of WASA Rawalpindi.

Issuance of Instructions:

The Plan will be submitted to the Government of the Punjab, Housing, Urban Development and Public Health Engineering Department for issuance of instructions for implementation of Plans. The Secretary, HUD&PHE Department shall issue instructions to each of the Water and Sanitation Agency for implementation of the phased extension of their service delivery area to the entire city boundary.



KEY DEFINITIONS

Action Plan is defined as a detailed time-bound plan with activities/resources, needed for the extension of the Service Delivery Area boundary to be aligned with the "city" boundary.

Service Delivery Area is defined as the area within which the entity is responsible for infrastructure development and service delivery

Asset Management: The process of decision-making, planning and control over the acquisition, use, safeguarding and disposal of assets to maximize their service delivery potential and benefits, and to minimize their related risks and costs over their entire life.

Level of Service: The defined parameters that characterize essential service delivery requirements for a particular service, against which performance may be measured. Criteria can relate to availability of the service, quality/condition, quantity, reliability, responsiveness, environmental acceptability and financial implications. Measures are identified for each criterion and used for performance monitoring and reporting and as a departure point for risk management.

Maintenance: The actions required for an asset to achieve its expected useful life. Maintenance can be planned or unplanned. Planned Maintenance includes measures to prevent known failure modes and can be time or condition based Repairs are a form of unplanned maintenance to restore an asset to its previous condition after failure or damage. Expenses on maintenance are considered operational expenditure.

Operating Expenditure (OPEX): Expenditure necessary to provide services such as maintaining roads, providing water and collection of waste. Examples of OPEX include staff costs, administration costs, consumables, maintenance and repairs and feasibility studies.

Operations: The use of manpower and consumables (such as energy, chemicals and materials) required for an asset to operate to the required performance.

Practices Improvement Plan - An action plan to improve the way infrastructure management is practiced in the municipality, based on an assessment of existing and target practice, and focusing on management processes, systems, data, and organizational arrangements. The initial Practices Improvement Plan may be prepared in the form of a Business Plan to be driven on a program basis.

Rehabilitation: Works to rebuild or replace parts of an asset to enable it to the original capacity and performance, and materially extend its useful life (which may be a full or partial extension of life – i.e. less than its original expected useful life).

Renewal: The replacement or rehabilitation of an asset. Expenses on renewal works are considered capital expenditure.

Remaining Useful Life: The time remaining until an asset ceases to provide the required standard of performance or economic usefulness.

Replacement: The complete replacement or reconstruction of an asset with one that performs to a similar standard of performance, as a result of which the asset life can be considered to have re-commenced.

Residual value: The net amount which the entity expects to obtain for an asset at the end of its useful life after deducting the expected costs of disposal.

Risk Management: The application of a formal process that identifies the exposure of a municipality to service performance risk and determines appropriate responses.

Upgrading: The augmentation or alteration of an asset that results in a material improvement to capacity or performance. Expenses on upgrading works are considered capital expenditure.



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1 Introduction

1.1 Background

Government of the Punjab, Pakistan with financial assistance from the World Bank, is implementing "Punjab Cities Governance Improvement Project (PCGIP)" for strengthening systems for improved planning, resource management, and accountability in five large cities of Punjab, i.e. Lahore, Faisalabad, Multan, Gujranwala and Rawalpindi.

Disbursement Linked Indicator-1 (DLI-1) covers improved Resource Planning with the objective of moving towards an integrated and multi-year planning process.

1.2 Requirement of Year 3

The Year 3 requirement is a notified and approved Action Plan for phased extension in Service Delivery area for WASA Rawalpindi to align such area to "city" boundary over the Action Plan time period. Boundary of "city" area adopted by Rawalpindi CDG and WASA as their planning and service area.

WASA Rawalpindi has prepare its Action Plan as per detail and submit for approval to the HUD&PHED with time lines and implementation arrangements.

1.3 Objective

The Objective of the Phase Action for Resource Planning is;

1. Develop a system of resource planning in WASA Rawalpindi
2. Set up an organizational arrangement at Planning Department with responsibilities and resources to plan for resources and phase extension of services
3. Plan for phase extension for service delivery
4. Monitors the condition and requirement of service delivery of assets
5. Report compliance to HUD&PHED and stakeholders
6. Improve service delivery

2 Resource Planning for Phase Extension of Services

The first step in developing an integrated development plan and capital budget is an assessment of inventory including the current condition of all infrastructure assets. This process is completed as per Plan by WASA Rawalpindi with the support of Urban Unit through development of the Asset Management System and carrying out the network mapping using an asset management and planning approach for all 4 Sub Divisions.

A systematic process for capital investment planning was built around a comprehensive asset information base of WASA Assets that helps to determine the categorization of assets as per

- their level of service,
- need for renewal,
- replacement,
- expansion, and
- even retirement of the current inventory linked with GIS.

The current level of service and conditions of asset in WASAs provides the platform for determining future investment spending

The phased extension of services was carried out as a two-step approach. This is an ongoing Process

- I. Planning of existing assets and their replacement in the service delivery areas and;
- II. Planning of new assets in the un-served areas.

It is important that the areas in the un-served areas are identified so that trunk or major infrastructure can also be planned.



2.1 Life Cycle of Asset: Asset Management Framework

The WASA Rawalpindi has used the framework as proposed for its asset management and planning that is linked to acquisition of asset starts with its planning followed by acquisition, operation and maintenances and then its final disposal as shown in Figure2.1.

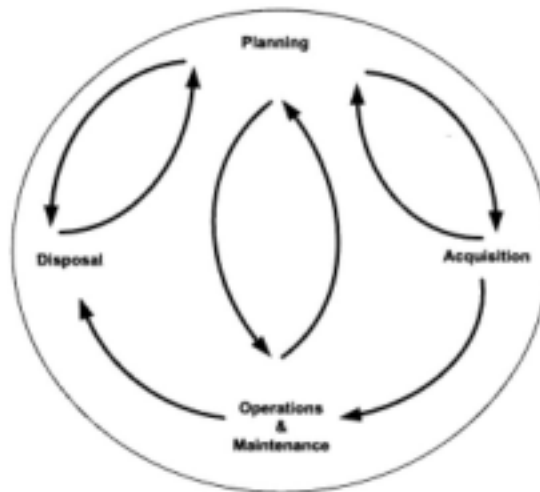


Figure 2.1: Lifecycle of an asset

The Asset Management and Resource Planning will be performed by Planning Department under Director P&D.

Under this plan, P&D is mandated as a scope to develop Asset Management Plan and consistently monitor current level of service, life cycle trends, asset condition and its deterioration in order to plan and develop 3 years Rolling IDAMP based on integrated new city boundary.

An Asset Management System is developed by Urban Unit which will be used for planning and management of asset and its services by WASAs. In the planning cycle various planning horizons will be used for Phase extension in services based on the life cycle of an asset as provided in Figure2.1 and Figure2.2.

Fig2.2 provides framework of asset management planning within the life cycle of asset management.

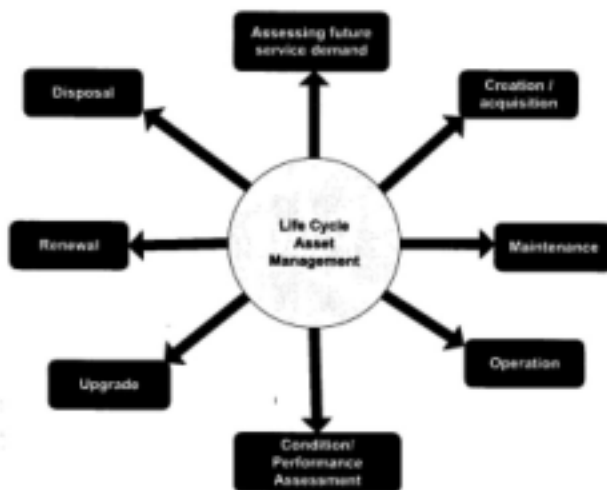


Figure 2.2: Lifecycle Asset Management (Network of Asset Management)

Figure 2.3 Summarizes the Asset Management Framework used for Resource Planning of WASA Multan.



Getting Started with an Asset Management Programme

CORPORATE STRATEGIC DIRECTION

- Identify corporate need
- Obtain organisational commitment (senior management & Council)
- Confirm corporate AM policy, strategy, goals and objectives



THE ASSET MANAGEMENT TEAM

- Define AM roles and responsibilities
- Oversee AM implementation
- Coordinate AM activities



IMPLEMENTING THE IDAMP

- Practices improvement
- Financial management
- Risk management
- Information management

AM REVIEW



- Legal compliance
- Levels of service & demand
- Infrastructure network assessment
- AM performance review

Tips:

- Link AM with the IDAMP & WASA strategy and goals
- Obtain top management and political support
- Establish a multi-disciplinary AM team
- Commence with a basic IDAMP over time



PREPARATION & REVISITING THE IDAMP

- Establishing and IDAMP plan structure
- Planning the process of developing/improving/updating the IDAMP
- Consultation & approval

Figure 2.3: Asset Management Framework



Process for Preparing an Asset Management Plan



Figure 2.4: Methodology to Prepare an Integrated Asset Management Plan

3 EXTENTION OF SERVICES ACTION PLAN FOR WASA RAWALPINDI

The Action Plan is summarized in *Table 3* for the phased extension of services with following time horizon and attributes is adopted WASA Rawalpindi for their asset management and planning purpose for phased extension in services.

Plan Type	Time Line Years	Attributes
IDAMP	3	CAPEX AND OPEX BUDGET linked with KPI
INTEGRATED DEVELOPMENT PLAN	5	CAPEX AND OPEX BUDGET linked with Strategic KPI and Business Plan
Master Plan/ Comprehensive Municipal Infrastructure Plan	10-20	INFRASTRUCTURE PLAN AND DESCRIPTION Linked with infrastructure need of population and city boundary with various options

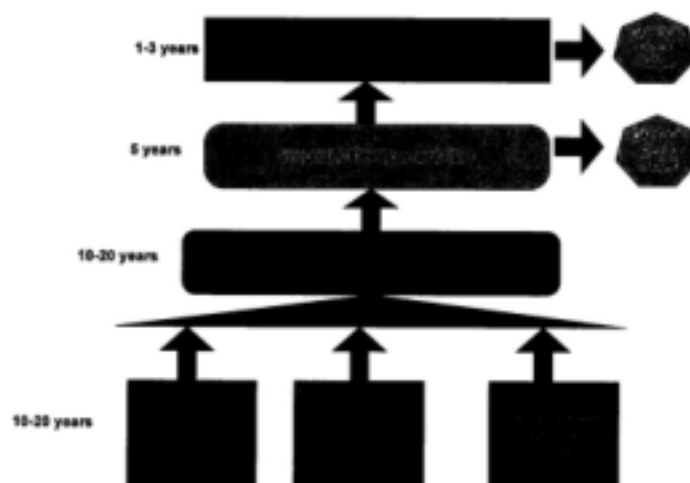


Figure 3.1: Comprehensive Municipal Infrastructure Plans

a. Boundary Alignment

P&D will ensure that all proposal and investment requirement as per notification of HUD&PHED all planning, mappings and design of asset management and renewal and replacement system shall confirm to the city boundary. A certificate will accompany with all investment application, PC-I & project proposal etc.

b. Notification of Integrated Asset Management Policy

WASA Rawalpindi has prepared to notify Integrated Asset Management Policy after approval of Development Authority with aim to demonstrate their asset management objectives, institutional arrangement, asset creation and replacement criteria and responsible business unit to prepare and update the Integrated Asset Management Plan for WASA Rawalpindi given below.

c. Notification of Design Criteria & Technical Specification

WASA Rawalpindi will review its design criteria of various service delivery assets based on the resource availability (water resources, existing assets capacity to carry water or sewerage, population density), population growth, density, material, life cycle of assets and service delivery requirement for the approval of HUD&PHED by November 2015 for the following categories

- i. WASA existing Service Area
 - Water supply
 - Sewerage
 - Drainage
- ii. Housing Societies
- iii. New settlements
- iv. Main Trunk and Infrastructure
- v. Water & Waste Water Treatment Plants

A Consultant Firm will be hired under PCGIP program to comprehensively review the design criteria in consultation with WASA Rawalpindi and Urban Unit.



4 Key Performance Indicator & Benchmarking

The WASA Rawalpindi as per notified indicators by HUD&PHED has adopted the KPI for Bench Marking and Reporting.

Designation of focal person & team:

- Director Planning is the focal person for the whole activity
- The focal person will directly report to the MD of WASA.

Broad TORs of the focal person are:

- a) Constitute a team of staff members within WASA for his assistance
 - b) Develop a six monthly activity plan with team and get it approved by MD
 - c) Develop a process and strategy for data generation against agreed indicators
 - d) Establish a new robust filing system to track all record when required
 - e) Establish a mechanism of coordination with stakeholders
 - f) Take lead role in analyzing the periodic data, comparison with previous data and recommendations
 - g) Lead the team in briefing the WASA Rawalpindi senior management on periodic data analysis, identify gray areas and suggest improvements
 - h) Assist the MD in meeting with stakeholders on presentation of periodic data
 - i) Any other relevant activity as assigned by the MD
- The Director Planning will constitute a team which should have representation from all Towns/ Directorate for Reporting.
 - a) WASA management will display the periodic data at a prominent place in its building for its staff and clients.
 - b) MD or focal person will make periodic presentation to the city council on

the state of WSS and performance of WASA.

The WASA Rawalpindi will submit on PWON Web data on site every six month along with LOS submitted by MD & PWON Report to Sec HUD&PHED & copy to P&DD & WASA Rawalpindi Web site .

The following data will be provided in addition to IBNET Benching on Web site and Report to HUD&PHED six monthly with First Submission December 2015.

Table 1: Level of Service in Years

	Level of Services	Criteria Definition	2016	2017
1.	Water supply coverage	Population with easy access to water services under utility /WASA service area /total population under utility's notional responsibility, expressed in percentage.		
2.	Sewerage coverage	Population with sewerage services (direct service connection)/total population under utility's notional responsibility, expressed in percentage.		
3.	Duration of water supply in Hours	Average hours of service per day for water supply.		
4.	Water production per day	Total annual water supplied to the distribution system (ex-treatment plant and including purchased water, if any) expressed by population served per day.		
5.	Waste water collected per day	Total quantity of wastewater collected per day		

	Level of Services	Criteria Definition	2016	2017
6.	NRW	Difference between total water produced (ex-treatment plant) and total water sold expressed as a percentage of total water produced.		
7.	Water Quality Monthly Reports % pass at production & % pass Consumer ends	As per WHO protocol		
8.	% of assets condition above average as per Survey	UU Energy Audit Bench Mark		
9.	Power Factor of Asset above 95% in % of total ASSETS	UU Energy Audit Bench Mark		
10.	Complaints resolved on time % MONTHLY in each town and consolidated	Complaint Data from Compliant Management System DASH Board		
11.	Revenue collection against Bill %	As per indicator		
12.	Pressure in Water supply System	In Bar as measured a key locations		
13.	Asset Management System is Operational	Asset Inventory and Data completed and Installed and Used by 70% of Grade 17 Officers	70	90

4.1 Ageing and Asset Categorization & Risk Assessment

The assets are categorized as per performance, their age, and level of service, failure history and risk associated with failure as per following score.

The Tool Developed based on 24 indicators by WASA Rawalpindi & urban Unit is provided in Annex VI. The Condition of Asset is provided in Annex VI-A

Condition	Condition	Action Required	Risk Category with Probability of Occurrence & Magnitude	
Poor	D	Immediate corrective action required	High	H
			Medium	M
			Low	L
Fair	C	Corrective action required	High	H
			Medium	M
			Low	L
Good	B	Evaluation for potential improvement required	High	H
			Medium	M
			Low	L
Excellent	A	No corrective action required	High	H
			Medium	M
			Low	L

The Complete Detail of All Asset on the GIS is attached as Annex-VI-B

TABLE 2: SUMMARY ACTION PLAN

Action Point	Actions	Activities	Time lines	Resources	Status of Action Plan
1	Boundary Alignment	<ul style="list-style-type: none"> Boundary demarcation and confirmed on the GIS 	April 2015	Maps and GIS Unit in each WASA with all access to be provided	<p>To be notified and adopted by WASA Resopind in their Business Process</p> <p>new Boundary notified and Map produced and updated on web site and also in the news paper</p>
2	2.1 Notification of Integrated Asset Management Policy	<ul style="list-style-type: none"> Development of policy by WASA Notification of Policy after approval of HUDHED The Policy shall also include New Asset specification for water supply and drainage (pipe material) Design Criteria Per Capital Requirement of water supply as per zones / density / new housing societies 	<p>April 2015</p> <p>June 2015</p>	Designated Staff and resources as per policy	<p>Infrastructure Asset Management Policy:</p> <p>Prepared</p>

Action Point	Actions	Activities	Time lines	Resources	Status of Action Plan
	<p>2.2. Notification of Design Criteria for WASA Service Area</p> <ul style="list-style-type: none"> Housing Societies New settlements 				
3	<p>Integrated Asset Management (IAM) Team to be notified as a focal Department/Unit/Cell for initiating the process of action planning supported by GIS Cell of WASA</p>	<ul style="list-style-type: none"> Director Planning to be notified as the focal person heading IAM Following TOR. Carry out boundary demarcation and verification by GIS Confirm all the boundaries of WASA regions/Towns Identify all the boundaries of new service areas in each town Finalize design specialization of all assets present and future including per Capita Requirement Identify present and future housing schemes 	May 2015	<p>Team and resources as per requirement. GIS and Computer systems with SOC and XEN with Software</p>	Notified by MD WASA with Director P&D as its head

Summary of Action Plan

Action Point	Actions	Activities	Time lines	Resources	Status of Action Plan
		generally, and other existing work/MS and sewerage services used and mechanism on GIS.			
4	Level of Services Indicators to be notified for phased extension and existing services areas	<ul style="list-style-type: none"> • LOS indicators for water supply, sewerage, drainage and financial performance in each town or zone & WASA Level is established, notified and linked to MIS-GIS based system and reported Bi Annually • Water supply coverage & Sewerage coverage • Duration of water supply in hours • Water production • Waste water collected • NRW • Water Quality Monthly Reports at production & Consumer ends • % of assets condition above average • Power Factor of Asset 	<p>Sep 2015</p> <p>January 2016</p>	<p>MSE system and PWON Web site updated</p> <p>MSE and Regulation Wing at HUDPHED</p>	<p>Reporting of Annual KPI as per PWON Indicators by WASA Rawalpindi</p> <p>First Report December 2015</p>

Action Point	Actions	Activities	Time lines	Resources	Status of Action Plan
		<ul style="list-style-type: none"> Revenue collection % Complaints resolved on time Pressure in Water supply System Asset Management System Operational PWON indicators 			
5	Ageing and Asset Categorization	<ul style="list-style-type: none"> Each WASA to categorize their water supply, sewerage and drainage assets as per following criteria in each town and at WASA level Age of asset Asset performance for service delivery (A, B, C, D) Complaint data related to each asset performance 		Survey equipment, Energy Audit equipment, CCTV camera, GPS, Mapping and Computers in each Sub-Division and Asset Management MIS system.	GIS Mapped prepared as Annex
6	Identification of Replacement / Rehabilitation Assets in existing service delivery area	<ul style="list-style-type: none"> GIS Mapping of all assets based on the action 5 Prioritization of asset for replacement/renewal/review 	April 2015	Survey equipment and HR	Mapping Completed on GIS

Action Point	Actions	Activities	Time lines	Resources	Status of Action Plan
	for water supply, sewerage and drainage	<ul style="list-style-type: none"> Coating of each asset replacement or rehabilitation cost as per MRC O&M cost of each asset 			
7	Prepare Asset Management Plan	As per notified Mechanism		Asset Management System and Training	2015-16
7	Preparation of IDAM	• Template of IDAM	February 2016	Asset Management System and Training	2015-16
8	Notification of IDAM	• Cycle of IDAM	Sep 2015	Asset Management System and Training	As per P&D directives
9	First Year IDAM	• As per template and cycle	March 2016	Asset Management System and Training	2015-16

Action Point	Actions	Activities	Time lines	Resources	Status of Action Plan
10	Preparation of IDAM monitoring system	• Implementation of asset Management system	December 2015	Training and Asset Management System	Notification and adaptation of IDAMP
11	Annual Monitoring Report	• Implementation of asset Management system	June 2016	Training and Asset Management System	Notification and adaptation of IDAMP
12	Phase Extension Plan and Costing for Year 3	• Implementation of asset Management system	June 2016	Training and Asset Management System	Notification and adaptation of IDAMP
13	Phase Extension Plan and Costing for Year 5	• Implementation of asset Management system	June 2016	Training and Asset Management System	Notification and adaptation of IDAMP
14	Phase Extension Plan and Costing for Year 10	• Implementation of asset Management system	July 2017	Training and Asset Management System	Notification and adaptation of IDAMP
15	Phase Extension Plan and Costing for Year 25	• Implementation of asset Management system	December 2017	Training and Asset Management System	Notification and adaptation of IDAMP

Summary of Action Plan

Action Point	Actions	Activities	Time lines	Resources	Status of Action Plan
16	Approval of Phased Plan	<ul style="list-style-type: none"> Implementation of asset Management system 	With month 1 after submission	Training and Asset Management System	Notification and adaptation of IDAMP
17	New Housing Societies in WASA Rawalpindi Area	<ul style="list-style-type: none"> Standards Agreements for service delivery Reporting NOC protocol Notification of Part - Urban Structure Plan 	March 2016	Assessment Reports and Mapping of all Housing Societies as per Master Plan	AS per Survey and Notification by LDA Approval of Structural Plans

①

NO.SO(UD) / 21/9
GOVERNMENT OF THE PUNJAB
HUD & PHE DEPT:

Dated: 20.09.2007

To

The Managing Director (WASAs),
LDA, FDA, RDA, GDA & MDA

Sub-

PERFORMANCE CRITERIA FOR WASAs IN PUNJAB -
WORKING TOWARDS STRATEGIC AND PERFORMANCE
IMPROVEMENT PLANS.

I am directed to enclose herewith copy of Performance criteria
for WASAs in Punjab, received from Urban Unit, Government of Punjab for
implementation.

DA/AA,

UNDER SECRETARY (UD)
-042-9273272
20/09/07

c.c.

Project Director, Urban Unit, P&D Department for information.

M file
Abaid
Shahnam. DPL. file

21/9

NO. SO(UD) 1-11/2007
GOVERNMENT OF THE PUNJAB
HUD & PHE DEPTT:

To


Dated: 17.09.2007

The Managing Director (WASAs),
LDA, FDA, RDA, GDA & MDA


Subj: **ACTION PLAN FOR GENERATING TECHNICAL
FINANCIAL, COMMERCIAL DATA AND BENCH MARKING.**


I am directed to enclose herewith copy of Action Plan for
Generating Technical, Financial, Commercial data and Bench Marking,
received from Urban Unit, Government of Punjab for implementation.

DA/AA


UNDER SECRETARY (UD)
-043/0213272
17/9/07

C.C.


Project Director, Urban Unit, P&D Department for information


Abid
Sabnam. DPL. free.

WASA Rawalpindi -Integrated Asset Management Policy

Title: Asset Management Policy Owner: MD

Date of Approval: 25th April 2015.



1. Policy Statement

WASA Rawalpindi has a focus on sustainable service delivery. The goal of asset management is to meet the required levels of service, in the most cost effective manner, through the management of assets for present and future customers; and to demonstrate this to customers and stakeholders.

Asset management benefits relate to accountability, risk management, financial efficiency and service management in the most sustainable way.

2. Responsible Officer

The Deputy Managing Director Engineering is responsible for the implementation and maintenance of this Policy under the oversight of MD.

3. Key Definitions

3.1 Asset

A physical component of a facility which has value, enables services to be provided and has an economic life greater than 12 months.

3.2 Asset Inventory

A record of asset information considered worthy of separate identification including inventory, historical, condition, risk and construction, technical and financial information about each asset. Physical inventory will be verified annually.

3.3 Asset Management (AM)

The combination of management, financial, economic, and engineering and other practices applied to physical assets with the objective of providing the required level of service in the most cost-effective manner.

3.4 Asset Management Information System

An asset management system is a combination of processes, data and

software applied to provide the essential outputs for effective asset management such as reduced risk and optimum infrastructure investment.

3.5 Levels of Service (LOS)

The defined service quality for a particular activity, against which service performance may be measured against Key Performance Indicators as per notified indicator.

LOS usually relate to quality, quantity, reliability, responsiveness, environmental acceptability and cost.

3.6 Lifecycle Cost Analysis

The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, and rehabilitation and disposal costs.

4. Statutory Obligation

WASA Rawalpindi will manage its assets in accordance with Government Policy and legislative requirement and statutory obligation

5. Strategic Approach

Principles and key elements are:

- Consult Consumers , community and stakeholders to develop LOS;
- Provide the defined LOS and monitor and report performance;
- Develop cost-effective management strategies for the long term;
- Understand and meet the impacts of growth through demand management and infrastructure investment;
- Undertake Lifecycle Cost Analysis on all asset decisions;
- Undertake risk identification, assessment and control;
- Use physical resources sustainably;
- Ensure that a comprehensive Asset Register is maintained and asset condition assessments are undertaken as per notified mechanism ;
- Ensure that sufficient and accurate information is captured in an Asset

Management Information System to enable effective asset management, performance measurement and depreciation estimations;

- Undertake continuous improvement in asset management practices; and
- Ensure that an infrastructure funding renewal gap is not created for future generations of customers.
- Business/operational plans will integrate these principles in operational planning.
- HSE will be ensured in the management of Asset through HSE Policy

6. Responsibility

Asset management is the responsibility of all staff and this policy is a reference for all WASA Rawalpindi employees. The policy has been designed for the use by all WASA staff, and is particularly relevant to the Senior Management Team, and those employees directly involved in the formal application of asset management. This Asset Management Policy provides the framework, together with the Business Plan, to enable asset management strategy, objectives, targets and performance indicators to be produced for approval by the Board of Directors

7. Review

This policy will be reviewed annually by the WASA Senior Management as and when warranted

Health & Safety Policy

Title: WASA Rawalpindi HSE Policy Owner: DMD Engineering

Date of Approval:  by the Board Committee.



WASA Health and Safety Policy

WASA Rawalpindi is committed to ensuring that the health and safety of our people, contractors or anyone who enters our work areas is not compromised by our activities. We will continue to work towards zero injuries.

To do this WASA Rawalpindi will:

- Always give health and safety first priority
- Make sure people have, understood and are held to, health and safety accountabilities
- Consult with people about health and safety issues
- Provide appropriate information, education and training in health and safety.
- Proactively manage health and safety risks by identifying, assessing controlling and hazards
- Ensure we have effective health and safety management system
- Measure health and safety performance, and acting to continually improve our performance.
- Comply, as a minimum with all health and safety legislative requirement. We will Endeavour to exceed legislative requirements whenever practicable.
- The responsibility of everyone in WASA Rawalpindi is to:
 - Take care relating to the health and safety of self and those around.
 - Adhere to agreed health and safety procedures both at home and work, and encourage others to do so
 - Be actively involved in identifying and implement initiatives that improve health and safety
 - Immediately report, and if appropriate, rectify hazardous condition observed.

B.M Indicators

WASA will use the following B.M indicators for data collection as notified by the HUD&PHED.

WATER & SANITATION PERFORMANCE BENCHMARKING INDICATORS

A. Coverage		
INDICATOR	UNIT	CONCEPT
1. Water Coverage	%	Population with easy access to water services under utility /WASA service area /total population under utility's notional responsibility, expressed in percentage.
2. Sewerage Coverage	%	Population with sewerage services (direct service connection)/total population under utility's notional responsibility, expressed in percentage.
B. Water Consumption and Production		
INDICATOR	UNIT	CONCEPT
3. Water Production	lpcd	Total annual water supplied to the distribution system (ex-treatment plant and including purchased water, if any) expressed by population served per day.
4. Water Consumption	lpcd	(Total annual water sold + Total annual volume of free supplies) expressed by population served per

		day
5. Metered Water Consumption	lpcd	Total annual metered water consumed expressed by metered population served per day

C. Unaccounted for Water

INDICATOR	UNIT	CONCEPT
6. Unaccounted-for Water	%	Difference between total water produced (ex treatment plant) and total water consumed (which is water sold plus free supplies) expressed as a percentage of total water produced.
7. Non-Revenue Water	%	Difference between total water produced (ex treatment plant) and total water sold expressed as a percentage of total water produced.

D. Metering Practices

INDICATOR	UNIT	CONCEPT
8. Proportion of connections that are metered	%	Total number of metered water connections expressed as a percentage of total number of connections
9. Proportion of functional meters	%	Total number of water connections with functional/operating meters expressed as a percentage of total number of metered water connections
10. Proportion of water	%	Volume of water sold that is

sold that is metered		metered expressed as a percentage of total volume of water sold
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E. Pipe Network Performance

INDICATOR	UNIT	CONCEPT
11. Pipe Breaks	breaks/km/yr.	Total number of pipe breaks per year expressed per km of the water distribution network.
12. Sewerage Blockages	blockages/km / yr.	Total number of blockages per year expressed per km of sewers

F. Cost and Staffing

INDICATOR	UNIT	CONCEPT
13. Unit Operational Cost	Rs./m3 sold Rs./m3 produced	Total annual operating expenses ¹ /Total annual volume of water sold. Total annual operating expenses ¹ /Total annual water of water produced.
14. Staff/'000 Water conn. Staff/'000 W&S conn.	Ratio	Total number of staff expressed as per thousand water connections and per thousand water and sewerage connections.
15. Salary Costs as a proportion of Operating Costs	%	Total annual salary costs (including salaries, wages, pensions, other benefits, etc.) expressed as a percentage of total annual operating costs.

16. Power/Electricity Costs as a proportion of Operating Costs	%	Total annual power/electricity costs of the utility expressed as a percentage of total annual operating costs.
17. Contracted-out service costs as a proportion of Operating Costs	%	Total cost of services contracted-out to the private sector expressed as a percentage of total annual operating costs.

Note 1: Annual operating expenses exclude depreciation, interest and debt service

G. Quality of Service

INDICATOR	UNIT	CONCEPT
18. Continuity of Service	Hrs./day	Average hours of service per day for water supply.
19. Complaints about W&S services	% of W&S conn	Total number of W&S complaints per year expressed as a percentage of the total number of W&S connections.
20. Wastewater treatment	%	Proportion of total sewage generated that is treated by at least primary treatment (including screening).

H. Billings and Collections

INDICATOR	UNIT	CONCEPT
21. Average Tariff	Rs./m ³ /yr.	Total annual operating revenues (W&S) expressed by annual amount of water sold.

22. Residential fixed charge	Rs./conn./yr.	Any fixed component of the residential tariff (total amount).
23. Ratio of industrial to residential charges	%	The average charge (per m ³) to industrial customers compared against the average charge (per m ³) to residential customers.
24. Connection charge – Water Supply and Sewerage	Rs.	One time charge for obtaining a residential piped water supply connection and a residential sewer connection.
25. Collection Period	Months	Year-end accounts receivable/Total annual operating revenues expressed in months equivalent of sales.

I. Financial Performance

INDICATOR	UNIT	CONCEPT
26. Working Ratio	Ratio	Total annual operating expenses/Total annual operating revenues
27. Debt Service Ratio	% Operating Revenues	Total annual debt service costs expressed as a percentage of total annual operating revenues.

J. Capital Investment

INDICATOR	UNIT	CONCEPT
28. Investments	% Operating Revenues	Total annual investments expressed as a percentage of total annual operating revenues.

BENCHMARKING WATER AND SANITATION UTILITIES

DATA DEFINITIONS

The benchmarking data list, and their associated definitions, is provided in the Table below. Almost all data items are required as either a numerator or a denominator for one or more of the core cost and performance indicators. The few that are not used for this purpose have been collected to provide additional data that will be helpful in making comparisons between utilities. These additional data items are identified by the letters FIO (For Information Only).

Sr No.	Data Item	Comment	Unit
General Information: Utility			
1	Utility name	Full name of utility. Please provide: Long name - up to 50 characters Short name - up to 20 characters	Text
2	Contact Name, Address, Tel. #, Fax #, e-mail	Full contact details to allow communication with WSP	Text
3	Country (FIO)	State country in which utility is located	Text
4	Region/State (FIO)	State region/state within country	Text
5	City (FIO)	State City on which utility services are centered	Text

6	Minimum Annual Salary (FIO)	Country/Region/City's minimum annual per capita salary	Rs./yr.
(j) General Information: Utility Service Area			
1	Total Population.	Total population under notional responsibility of the utility irrespective of whether they receive service	'000 inhabitants
2	Type of services provided	Specify if : (A) Water only (B) Sewerage only (C) Water and sewerage (D) Water, sewerage and other	A,B,C,D as the case may be
3	Nature of service area	Specify if: (1) Urban; (2) Rural; or (3) Urban and rural.	1,2,3 as the case may be
4	Number of Towns served with Water (FIO)	Total number of towns under responsibility of the utility irrespective of their service coverage.	Number
5	Number of Towns served with Sewerage (FIO)	Total number of towns under responsibility of the utility irrespective of their service coverage.	Number
6	Total Number of Staff	Total number of staff working at the utility.	Number
7	Extent of private sector involvement in the routine	Look at the use of the private sector in routine operation of	A, B, C, D, E, F, G as

	operation of the facility (i.e. excluding capital creation and procurement)	the utility e.g. O&M, landscaping, security, billing, etc. - A) None B) multiple service contracts C) management contract(s) D) lease contract(s) E) concession contract(s) F) BOOT/BOT(s) G) full divestiture to private sector	the case may be
III. Water service			
1	Population served	Population under responsibility of the utility with access to water through house connections and standpipes (including other sources of potable water which are provided by the utility e.g. deep bore handpumps)	'000 inhabitants
2	Water Connections year end	Number of water connections at year-end.	'000
3	Households connected year end	Number of households served at year-end (households might not correspond to connections e.g. cities with hi-rises/apartment blocks, etc served by a single	'000

		connection; so this figure should include the total number of households in each high-rise/apartment block).	
4	Inhabitants/household	Number of inhabitants per household.	Number
5	Metered Connections	Total number of metered water connections	'000
6	Connections with operating/functional meters	Total number of metered water connections whose meters are functional/operating at year end	'000
7	Metered Household Connections	Total number of household connections that are metered	'000
8	Households with operating/functional meter	Total number of metered household connections whose meters are functional/operating at year end	'000
9	Length of water distribution network	Total length of the distribution network (excluding transmission lines)	Km
10	Volume of water produced	Total volume of water produced for the service area	Million m ³ /year

		(ex-treatment plant and including purchased water, if any).	
11	Volume of water sold – metered	Total volume of water billed which is metered.	Million m3/year
12	Volume of water sold – unmetered	Total volume of water billed which is unmetered.	Million m3/year
13	Volume of free supplies	Total Volume of water that is supplied by the utility free of cost (through public standposts)	Million m3/year
14	Volume of water sold to residential customers – metered	Total volume of water billed to residential customers which is metered.	Million m3/year
15	Volume of water sold to residential customers – unmetered	Total volume of water billed to residential customers which is unmetered.	Million m3/year
16	Volume of water sold to industrial customers	Total volume of water billed to industrial customers	Million m3/year
17	Number of Pipe Breaks	Total number of water pipe breaks in the distribution network during the year.	Number
18	Duration of supply	Average hours of service /day.	Hrs./day
19	Number of complaints	Total number of customer complaints related to the water service during the	Number

		year.	
IV	Sewerage service		
1	Population served	Population under responsibility of the utility with sanitation services through house connections.	'000 inhabitants
2	Sewerage connections year end	Number of sewerage connections at year end in thousands.	'000
3	Households connected year end	Number of households served at year end in thousands (households might not correspond to connections e.g. cities with hi-rises/apartment blocks, etc served by a single connection; so this figure should include the total number of households in each high-rise/apartment block)).	'000
4	Length of sewers	Total length of the sewerage network.	Km
5	Number of complaints	Total number of customer complaints related to the sewerage service during the year	Number

6	Number of sewerage blockages	Total number of sewerage blockages in the collection network during the year.	Number
7	Sewage Generated	Total Volume of sewage generated from the service area under the Utility	Million m3/year
8	Sewage Collected	Total Volume of sewage collected from the service area under the Utility	Million m3/year
9	Wastewater treatment	Proportion of sewage generated that is treated to at least primary level (i.e. screening and settlement of influent sewage)	%
V. Financial Information			
	<p>The information to be provided in this section is self-explanatory. However, definitions are given when ambiguity might exist. Much of the information is available in the annual financial statements. Otherwise, the source of information should be specified. If possible please comments on how fixed assets are</p>		

	valued. All information is annual and should be provided in local currency.		
1	Total Operating Revenues	Total billing of water and sewerage services, connection fees, well abstraction fees, reconnection fees and other operational revenues including subsidies, but excluding all taxes	Rs.
2	Total billings to residential customers	Total amount billed to residential customers during the year – to include fixed and volumetric charges only.	Rs.
3	Total billings to industrial customers	Total amount billed to industrial customers during the year – to include fixed and volumetric charges only	Rs.
4	Total Operational Expenses	Total operational expenses (W&S) excluding depreciation and financing charges (interest and principal repayments).	Rs.
5	Salary Costs	Total annual salary costs (including salaries, wages, pensions, other benefits, etc.).	Rs.

6	Power/Electricity Costs	Total annual power/electricity costs of the utility	Rs.
7	Contracted out Services costs	Costs of all services within Item II (7) above which are provided by private firms.	Rs.
8	Total Net Fixed Assets	Net Book Value of fixed assets at year end	Rs.
9	Total Debt Service	Total annual debt service costs (Including interest and repayment of principal)	Rs.
10	Annual Investments	Amount of capital investment during the year	Rs.
11	Year end accounts receivable	Total of all accounts receivable at year end including water billings, and all other outstanding invoices.	Rs.
VI. Tariff Information			
	The information to be provided in this section is also self-explanatory. This information should be obtained from the tariff structure.		
1	Tariff Structure	Provide complete tariff structure for all categories of	

		consumers (domestic, commercial and industrial)	
2	Fixed charge per month for residential customers	The fixed component of the bill (if any) for the provision of water and wastewater services. Indicate no fixed charge with a Zero	Rs./month
3	Connection charges – Water	Lump sum cost for residential water connection	Rs.
4	Connection charges – Sewers	Lump sum cost for residential sewer connection	Rs.

Reporting Format

Water & Sanitation Performance Benchmarking Indicators		CONCEPT			
INDICATOR		Reporting Period			
		Year1	Year2	Year3	Year4
1.	Water Coverage				
2.	Sewerage coverage				
3.	Water production million m ³ /year.				
4.	Water consumption million m ³ /year.				
5.	Metered water Consumption million m ³ /year.				
6.	Unaccounted for water % age				
7.	Non Revenue Water % age				
8.	Proportion of connection that are metered				

9.	Proportion of functional meters				
10.	Proportion of water sold that is metered (Bulk)				
11.	Pipe breaks				
12.	Sewerage Blockage				
13.	Operational cost %water connection %Water Sewerage Connection				
14.	Staff / 000 Water connection, Total Staff / 000 Water & sewerage connection				
15.	Salary costs as proportion of operating costs % age				
16.	Power / Electricity costs as a proportion of operating costs.				
17.	Contracted out service cost as proportion of operation costs % age				
18.	Continuity of service				
19.	Complaint about water & Sanitation service				

20.	Wastewater treatment				
21.	Average tariff				
22.	Residential fixed charge				
23.	Ratio of industrial to residential charge				
24.	Connection charge water supply and sewerage				
25.	Collection period				
26.	Working ratio				
27.	Debt service ratio				
J.					
28.	1 Investment Rs. in million				