

Annual Report

2017-2018



Dhaka Water Supply and Sewerage Authority

WASA Bhaban, 98 Kazi Nazrul Islam Avenue, Karwan Bazar, Dhaka 1215

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Dhaka WASA

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Asst. Public Information Officer
Dhaka WASA

Dhaka Water Supply and Sewerage Authority (DWASA)

Established in 1963

Responsibilities

- ❑ To supply portable water to the city dwellers
- ❑ Provide sewerage facilities to ensure a healthy and clean environment of the city.
- ❑ Provide storm water drainage facilities to remove the water congestion of the city.

Vision

To be the '**best water utility**' in the public sector of South Asia - Ensuring environment-friendly, sustainable and pro-people water management system.

Mission

- Constantly seek ways to better serve our customers.
- Reduce the dependency on ground water to surface water.
- Implement the projects effectively and speedily.
- Practice a corporate culture in its management and operation.
- Ensure a high level of transparency and accountability in all its service and activities.
- Improve the efficiency and reduce operating cost.

Strategic Planning

- # Converting surface Water Supply Source to 70% from existing 22% for sustainability.
- # Establishing DMA for Reducing NRW to 10% and Ensuring 24/7 Pressurized & pure Water supply.
- # 100% Legal Water Supply to LIC area by Dec 2018 for ensuring pro-people water supply.
- # Establishing 100% Sewerage System for protecting Environment.
- # 100% digitization of DWASA activities.

Achievements of DWASA under "Turn Around Programme"

- In 2009, under the Leadership of Hon'ble Prime Minister Sheikh Hasina, the whole Water Supply Policy has been turned into Environment Friendly, Sustainable and pro-people water management system. In achieving this 'change management policy' DWASA set its vision and mission and declared an action plan called 'Dhaka WASA **Turn-around Program**- for capacity building. The achievement of Turn-around Program, so far, are briefly as follows:
- Dhaka WASA is currently capable of producing **250 crores litres** of water against the daily demand of 235-240 crore litres for the city dwellers.
- The revenue income of DWASA has been increased by over **10 billion** taka from 3 billion taka.
- Implementing Mega Projects both in water Supply and Sewerage Sector.
- The operating cost has been reduced to 0.67 from 0.90.
- Introducing modern technology in water supply management, namely District Metered Area (DMA) which reduce system loss (NRW) to 5% from 40%
- Bringing low income Community (LIC) or slum dwellers under safe & legal water supply network.
- Introducing 100 percent online billing system including payment through SMS as well.

Milestone

- Introduced 'Digital WASA Green WASA' culture to inspire green practice in everyday work.

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Message

It's my pleasure to know that Dhaka Water Supply and Sewerage Authority (DWASA) is going to publish the Annual Report for 2017-2018 to showcase the activities and development of the agency.

Dhaka WASA, a service oriented autonomous commercial organization in public sector is working to ensure better water supply facilities for Dhaka dwellers. It was a great challenge for Dhaka WASA to ensure water of adequate quantity and quality round the clock. But through some pragmatic initiatives under '**Turn Around Dhaka WASA Programme**' the agency does have some great achievements including significant increase in water production, improved service quality, increased revenue and reduction of non-revenue water etc. It is a matter of great satisfaction that Dhaka WASA is improving day by day and has become a role model in the public sector utility services among the SAARC Countries.

The city dwellers will be glad to know that Dhaka WASA is moving towards 'Environment-friendly, sustainable and pro-people water supply management' by increasing its dependency on surface water instead of underground sources. By 2021 the ratio of surface and underground sources is targeted to 70: 30, which is currently coming 78 percent underground and 22 percent from surface water

Besides, Dhaka WASA is playing a pioneering role to materialize the dream of Digital Bangladesh of the present government led by Hon'ble Prime Minister Sheikh Hasina. We hope that we would contribute the nation-building process by upgrading Dhaka WASA into more customer-friendly and sustainable organization.

I wish a grand success of Dhaka WASA.

A handwritten signature in blue ink, consisting of several loops and a long horizontal stroke at the end.

Engr. Taqsem A Khan
Managing Director
Dhaka WASA

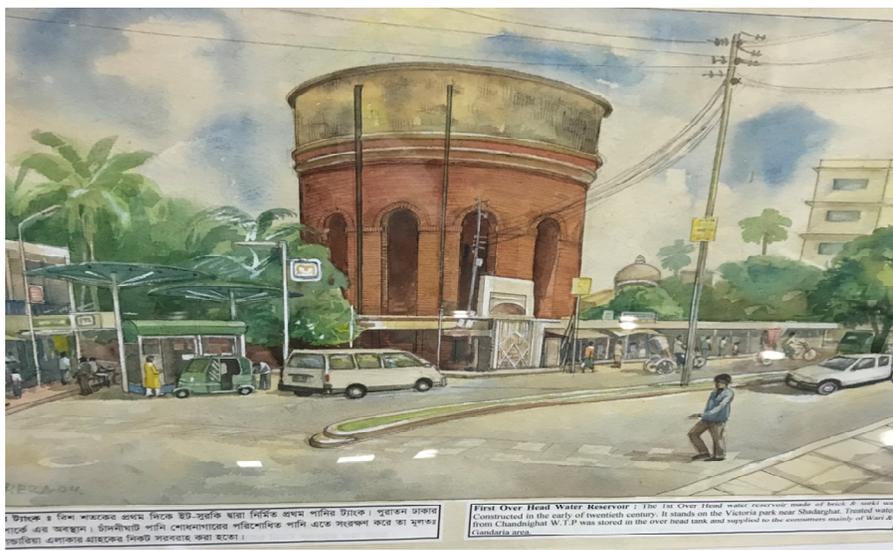
Introducing Dhaka WASA

Dhaka Water Supply and Sewerage Authority (WASA) is a service oriented autonomous commercial organization in the Public Sector, entrusted with the responsibility of providing water supply, sewerage disposal (wastewater), and storm water drainage service to the urban dwellers of Dhaka City. It covers more than 360 sq. km service area with more than 17 million people with a production capacity of 2500 million liters water per day (MLD).

Dhaka WASA was established in the year 1963 as an independent organization and currently which is running under WASA ACT 1996.



The First Water Treatment Plant in Dhaka City Established in 1874



The first overhead water reservoir made of brick and surki constructed in early of 20th century

Area of Jurisdiction

Till June, 1989, the jurisdiction of Dhaka WASA was limited only to Dhaka metropolitan area. Later on, Dhaka WASA had the responsibility for supplying water and operating sewerage system of Narayanganj city in early 1990. At present, mega city Dhaka and Narayanganj are identified as Dhaka WASA service area. For easy operation, maintenance and providing better public service, Dhaka WASA service areas have been divided into 11 geographical zones. Among those, 10 zones are within Dhaka city and one in Narayanganj city. Technical operation, maintenance and collection of revenue bills, and other related activities are managed by the zonal offices. As a result, public harassment has reduced significantly and quality of public service has been improved.

Organizational Structure

The organizational structure of Dhaka WASA was changed according to the WASA Act 1996. As mentioned in the Act, Dhaka WASA Board consists of 13 members, headed by the Chairman. The Board is formed by representatives from different professional organizations and Government officials. According to the organizational structure of 2007, total number of approved posts and present employees are as follows:

Class	Approved Posts	Existing Posts	Vacant Posts
First	309	263	46
Second	330	268	62
Third	1917	1244	673
Fourth	2111	1351	760
Total	4667	3126	1541

Though it shows there exist some vacant posts, in near future it would not be as Dhaka WASA is going to digitise all of its activities and also shifting its focus to surface water source which will reduce manpower significantly.

Dhaka WASA at a Glance

Water Supply

Item	Unit	2014-2015	2015-2016	2016-2017	2017-2018
Deep Tube well	Nr	702	760	795	827
Water Treatment Plant	Nr	4	4	4	4
Water Production/day	MLD	2420	2430	2450	2500
Water Line	Km	3461.56	3500	3600	3720
Water Connection	Nr	3,50,238	3,61,938	3,71,766	3,79,686
Overhead Tank	Nr	38	38	38	38
Street Hydrant	Nr	1643	1643	1643	1643

Sewerage

Item	Unit	2014-2015	2015-2016	2016-2017	2017-2018
Sewer Line	Km	916	930	930	934
Sewer Lift Station	Nr	28	26	26	26
Sewage Treatment Plant	Nr	1	1	1	1

Drainage

Item	Unit	2014-2015	2015-2016	2016-2017	2017-2018
Storm Sewer Line	Km	315	350	350	370
Open Canal	Km	74	74	74	78
Box Culvert	Km	10.5	10.5	10.5	10.5
Permanent Pumping Station		2	4	4	4
1. Kalyanpur		20m ³ /s	20m ³ /s	20m ³ /s	20m ³ /s
2. Dholaikhal		22 m ³ /s			
3. Rampura		-	25 m ³ /s	25 m ³ /s	25 m ³ /s
4. Kamalapur		-	15 m ³ /s	15 m ³ /s	15 m ³ /s

Revenue Income-Expenditure

(In million Taka)

	2014-2015	2015-2016	2016-2017	2017-2018
Revenue Income	7972	9,713	11,554	13,024
Revenue Expenditure	7868	9,524	11,328	12,742
Profit/Loss (+/-)	104.80	189.00	226	282

Water and Sewerage Tariff

(In million Taka)

	2014-2015	2015-2016	2016-2017 (In lack taka)	2017-2018 (In lack taka)
Billing	6899	8841	105285.95	1191110.47
Collection	6525	8574	100055.82	117942.50
Bill Receivable (Dues)	3251	4035	44711.09	45881.06
Equivalent dues Billing (monthly)	5.79	5.51	5.46	4.96

Development Projects

	2014-2015	2015-2016	2016-2017	2017-2018
Water Supply	5	5	5	5
Sewerage	2	3	1	1
Drainage	0	1	1	2
Technical Assistance Project	0	0	2	2
Total	7	9	9	10

Demand and Supply of Water Supplied by Dhaka WASA

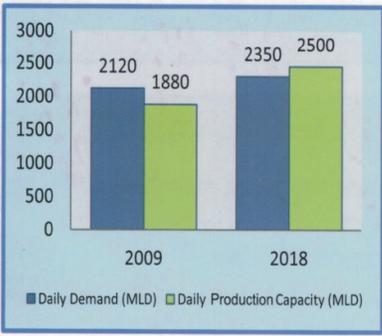
Year	Population (In million - approximately)	Water Demand (Million Liter)	Water Supply Capacity (Million Liter)	Shortage (Million Liter)	No. of Deep Tube wells
1963	0.85	150	130	20	30
1970	1.46	260	180	80	47
1980	3.03	550	300	250	87
1990	5.56	1000	510	490	216
1996	7.55	1300	810	490	216
1997	8.0	1350	870	480	225
1998	8.5	1400	930	470	237
1999	9.0	1440	1070	370	277
2000	9.5	1500	1130	370	308
2001	10.0	1600	1220	380	336
2002	10.50	1680	1300	380	379
2003	11.02	1760	1360	400	391
2004	11.56	1850	1400	450	402
2005	12.15	1940	1460	480	418
2006	12.65	1900	1540	460	441
2007	13.15	1980	1660	320	465
2008	13.65	2050	1760	290	490
2009	14.15	2120	1880	240	519
2010	14.50	2180	1990	190	560
2011	15.00	2240	2150	90	599
2012	15.00	2240	2180	60	615
2013	15.00	2250	2420	-	644
2014	15.00	2250	2420	-	672
2015	15.80	2250-2300	2420	-	702
2016	16.00	2400	2450	-	795
2017	17.00	2450	2500	-	827



Dhaka WASA

Bangladesh

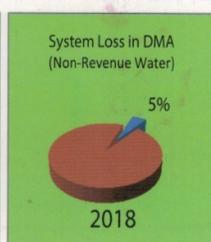
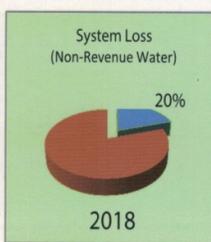
Achievements of Dhaka WASA at a glance (2010-2018)



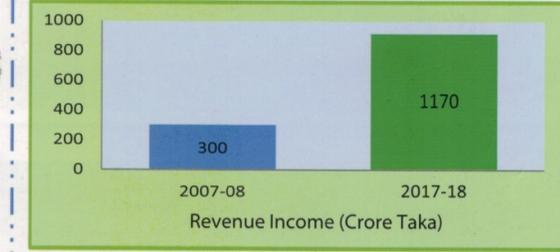
Water Supply: For the first time in last 50 years since Dhaka WASA established, it has achieved water production capacity more than its daily demand. In 2009, while daily production capacity was 1880 MLD against daily demand of 2120 MLD, production capacity increased to 2500 MLD. (Now, daily water demand is 2350 MLD).



System Loss (Non-Revenue Water - NRW):
 In 2010, NRW was more than 40%.
 In 2018, NRW is reduced to 20%.
 NRW in DMA reduced to 5%



Revenue Income: In FY 2007-2008, Dhaka WASA revenue income was about 3 Billion taka, while in FY 2017-18, the revenue income have increased to 11.70 Billion taka.



Before 2009, the Operational Ratio was 0.90. At present, it has reduced to 0.66. To be noted that World Best practice is 0.65.

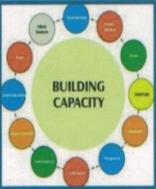




Billing System: 100% Digital Billing System. Whole billing system turn on to automation.



24 hours Paperless Billing/e-Payment facility has been introduced through SMS/On-line (Internet).



Capacity Building: In 2009, there were shortfalls in supplying water as demand gradually increased. Taking this issue under consideration, Dhaka WASA took dynamic initiatives named "Dhaka WASA Turnaround Program 2010-15". To establish "Good Governance" this program achieved that success.



By December 2019, all Low Income Community (LIC) of Dhaka City will be covered through legal water connection. Meanwhile, biggest LIC of Dhaka city named "korrail Bosti, Sattala slum, Bhasantek Slum" have already been covered with legal water connection.

Development Partners like Asian Development Bank (ADB) introducing Dhaka WASA as a "Role Model" to other developing Countries of South Asia. Recently ADB Published a book titled "The Dhaka City Water Service turn around-how Dhaka Connecting slums, saving water, raising revenues and becoming one of South Asia best public water utility".



In the meantime, Dhaka WASA has prepared three Master plans: i) Water Master Plan ii) Sewerage Master Plan and iii) Drainage Master Plan for Dhaka city.

As per water and sewerage master plan construction of 3 mega water treatment plant-Padma Jashaldia-450, Ghandhobpur-500, Sayedabad phase 3-450 MLD Capacity and Dasherkhandi sewage TP of capacity 500 MLD are going on.



In 2008, Foreign Investment in Dhaka WASA was almost "Zero". Whereas, in 2018, above 2.0 Billion USD have been invested in the water sector of Dhaka WASA.

Corporate Directory

Dhaka WASA Board

Chairman



Prof. Dr. M. Habibur Rahman,
WASA Bhaban
98 Kazi Nazrul Islam Avenue
Karwan Bazar, Dhaka.
Phone: 9133622, 01711-940968

Members

Picture	Name & Designation	Address & Contact	Representative of
	Md Mahbub Hossain Additional Secretary. Member of Dhaka WASA Board	Office: Joint Secretary, Ministry of Local Govt. Rural Development & Co- Operatives E-mail : mdmahbub1964@gmail.com Contact: 9110164	Ministry of LGRD and Cooperative
	Mr. Sudhangshu Shekhar Biswas Additional Secretary, (Budget-2), Member of Dhaka WASA Board	Office: Room No.-229, Bhaban No.-7, Finance Divison, Ministry of Finance (2 Floor), Bangladesh Secretariat. Phone: 02- 7169984 (Off). Cell: 01711-828978.	Ministry of Finance
	Abul Kasem Khan, President, Dhaka Chamber of Commerce and Industry (DCCI)and Member of Dhaka WASA Board	Office:9564033 (O)	Dhaka Chamber of Commerce and Industry (DCCI)
	Mr. Md. Mahamud Hosain FCA Vice President (F&A) The Institute of Chartered Accountants of Bangladesh (ICAB) & Member of Dhaka WASA Board	Office: Chartered Accountant Bhaban, 100, Kazi Nazrul Islam Avenue, Dhaka-1215. Phone: 01713245858	The Institute of Chartered Accountants of Bangladesh
	Engr. Md. Nuruzzaman Member of Dhaka WASA Board	Residence: 16/1, Road-24, DPHE- Officers Quarter, Road No- 24, Banani , Dhaka. Phone: 9882345, 01819-873689 .	Institute of Engineers
	Adv. Kazi Md. Nazibullah Huru Advocate, Bangladesh Bar Council. Member of Dhaka WASA Board		Bangladesh Bar Council
	Omar Faruk Secretary, Bangladesh Federal Journalism Union. Member of Dhaka WASA Board		Bangladesh Federal Journalism Union

	Dr. Mustafa Jalal Mohiuddin, President of Bangladesh Medical Association (BMA), Member of Dhaka WASA Board	Office: CELL: 01711 521026	Bangladesh Medical Association (BMA)
	Engr. A K M A Hamid President, Central Executive Committee, Institution of Diploma Engineers, Member of Dhaka WASA Board	Office: 01711-541553 Residence: House No.-23, Block-H, Road No.-1, Section-2, Mirpur, Dhaka-1216.	Institute of Diploma Engineers
	Hasibur Rahman Manik Councillor-for ward 26 (DSCC), Member of Dhaka WASA Board		Councillor-for wards-31,33,34 (seat-12) Dhaka South City Corporation
	Aleya Sarwar Daisy Councillor-for wards-31,33,34 (DNCC), Member of Dhaka WASA Board		Councillor-for wards-31,33,34 (seat-12) Dhaka North City Corporation
	Engr. Taqsem A Khan Managing Director, Dhaka WASA & Member ,Dhaka WASA Board	Office: Managing Director, 98, Kazi Nazrul Islam Avenue, WASA Bhaban (2nd Floor), Kawran Bazar, Dhaka-1215, Bangladesh. Phone: 8189626, Ext-201. Residence: Road No-55, Basa No.-12, Gulshan-2, Dhaka. Phone: 9337312, 01741-111002.	Managing Director & Chief Executive of Dhaka WASA.

Activities of Dhaka WASA Board

11 RjvB, 2017 Zwi tL AbyðZ XvKv I qmvi tevWp 246 Zg mfvi Avtj vP`mPx bs-3 G ubt`ðy³ umxvšl MpxZ nq t-
Avtj vP`mPx bs-3t XvKv I qmvi Dhaka Environmentally Sustainable Water Supply Project (DESWSP) cKt`i ũi Avl Zvq "Design Build, Operation (DBO) and Maintenance of Intake, Raw Water Pipeline and 500 MLD water Treatment Plant at Gandharbpur under DESWSP , Package-1 (D&B Contract) is: ICB-01/B&D/DESWSP/2014 and Package 2 (O& M Contract) is: ICB-02/O&M/DESWSP/2014" kxlR KtRi vKv vixcZôib ubtqMli Rb` `icT gj`iqb Kugv KZK msvi kKZ Ges এডিবি কর্তৃক অনাপত্তিকৃত আর্থিক ক্রয় প্রস্তাব স্থানীয় সরকার বিভাগে প্রেরণের অনুমোদন প্রসঙ্গে।

umxvšl 3t Dhaka Environmentally Sustainable Water Supply Project Gi Water Treatment Plant KtRi DBO c`KtRi Avl Zvq "Design Build, Operation (DBO) and Maintenance of Intake, Raw Water Pipeline and 500 MLD water Treatment Plant at Gandharbpur under DESWSP , Package-1 (D&B Contract) is: ICB-01/B&D/DESWSP/2014 and Package 2 (O& M Contract) is: ICB-02/O&M/DESWSP/2014" KtRi Rb` vKv vixcZôib M/S Suez International - OTV (JV) KZK `vLj KZ, `icT gj`iqb Kugv KZK msvi kKZ I Gilhe KZK AbicvEKZ Design Built Astk Pz`i cui giv Uv , fiv, Import Duties ev` Corrected Bid price 25,394,062,129 UKv, Uv , fiv I Import/ Duties mn Corrected Bid price 30,060,438,652/- UKv I ibugZ cub tkvabvMi BbtUK, cBc jBbv 3 eQt`i Rb` O & M KtRi Corrected Bid Price (Chemical cost mn) UKv 1099,539,630/- টাকার ক্রয় প্রস্তাব অনুমোদনের লক্ষ্যে প্রয়োজনীয় e`e`v MtYi Rb` `ibvq mi Kvi vefvM ic`Y Kiv tmK|

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Avtj vP'mP bs-4 t XvKv I qumvi Avl Zvax XvKv I qulvi mvcuB tbUI qvK®BgcãftgU cÖR± Gi “Rehabilitation of Distribution Network for NRW reduction (Including procurement of plant and construction of DTW pump stations) with O&M support” Contract No-ICB-02.11-KvRi wKv`vix cÖZövb ibtqumMi Rb` `icI gj`vqb KugvU KZË mgywi kKZ.Ges Gvllve KZË Abtgvw Z Avu_R cÖle `vbq miKvi vefvM tcÖtYi Abtgv` b cÖt½|

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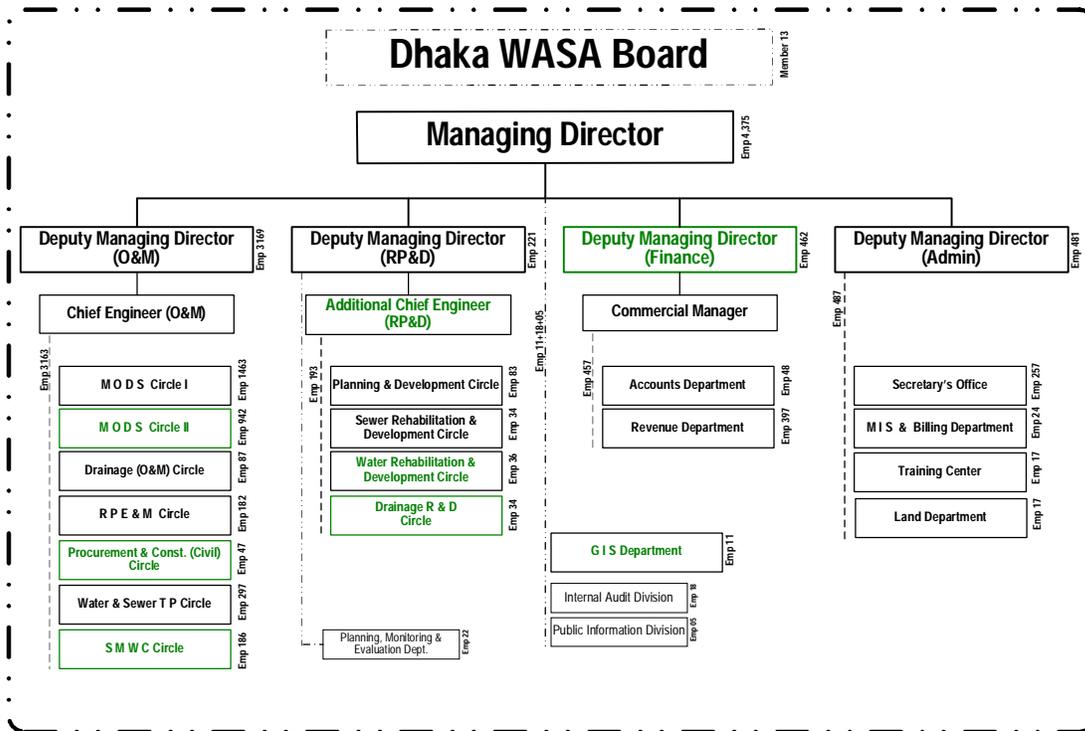
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Organogram of Dhaka WASA



Activities of Dhaka WASA

Dhaka WASA, as a service oriented autonomous commercial organization in public sector, is functioning through 4 wings that include Administration, Finance, Operation & Maintenance, and Research, Planning & Development. For better operation, maintenance, and customer care, the total service area of Dhaka WASA is divided into 11 geographic zones, which includes 10 in Dhaka City and 1 in Narayangang town.

Water Production

During the period 2017-2018, Dhaka WASA has achieved the capacity of daily production of 2500 million liter water per day (MLD) by using 827 deep tubewells and 4 Water Treatment Plants including Saidabad Water Treatment Plant Phase- I & II. The surplus water production capacity is a milestone in the history of Dhaka WASA.

Water Supply System

Mostly, water supply system of Dhaka WASA is dependent on ground water. Of them 78 per cent water comes from underground sources and the rest 22 per cent from surface water. Ground water is abstracted by using a total of 827 deep tubewells. Surface water is supplied by treating water of the river Shitalakshya and Buriganga through 4 Water Treatment Plants.

Dhaka WASA supplies water to the mega city of Dhaka and Narayanganj area. At present over 17 million people live in Dhaka and Narayanganj and this will increase many times by the year 2020.

It is notable that ground water level is declining by 2-3 meters per year due to continuous abstraction of water. For this reason Dhaka WASA, with the support & cordial cooperation of the present government, has pointed out the importance of reducing dependency on ground water by supplying water from surface water body as an alternative and sustainable source of water. For that purpose Dhaka WASA is moving towards Environment-friendly, Sustainable and Pro-people water supply management system. Several water treatment plants projects have already been taken with a view to increasy dependency on surface water up to 70 percent instead of present 22 percent.

Of them, saidabad Water Treatment Plant, Phase-III is under implementation, which will supply a total of 450 million liters water per day in the city. Furthermore, two additional large Water Treatment Plants at Gandharbapur and Padma (Josholdia) Water Treatment Plant, (Phase-I) have been taken. In Gandharbapur, it is planned to treat water from the river Meghna, which will produce 500 million liter of water per day. The Padma Water Treatment Plant is being built at Josholdia near the bank of the great river Padma from where 450 million liter treated water will be supplied for Dhaka city dwellers

Honourable Prime Minister Sheikh Hasina inaugurated Padma (Josholdia) Water Treatment Plant, (Phase-I) on 25 October, 2015.

Dhaka WASA has 410 (including 42 mobile generators) diesel-driven generators which help maintaining the abstraction of water from underground during the interruption of power supplies. Particularly during the summer season water demand as well as the electricity crisis becomes worst. At that period water supply system in Dhaka city is kept under normal condition by abstracting water with the help of these generators. Dhaka WASA has taken initiatives for purchasing more two hundred new generators which is under process. Moreover, if there is any water crisis anywhere in the city, Dhaka WASA instantly supplies water through using 43 water carriers and 44 trolleys.

Sewerage System

An effective sewerage system is a must for a healthy city. The sewerage system of Dhaka city was initiated in 1923. Due to lack of resources, most of the areas of Dhaka city are out of sewerage coverage. For a better and well-planned sewerage system in Dhaka city, a sewerage Master Plan has been made and at least four sewage treatment plants will be set up around the capital city. One of them is Dasherbandha Sewage Treatment Plant, which is already under implementation and the rest are (in Uttara, Mirpur, Rayerbazar) will be implemented one by one.

Summary of the existing Sewerage System is as follows:

- Number of Sewage Treatment Plant - 1
- Number of Sewage Lift Station - 26
- Sewer Line - 934 km
- Number of Sewer Connection - 88,980

Drainage System

Once there were sufficient canals in Dhaka city for drainage of water, among them Paribag, Dhanmondi, Begunbari, Dholaikhal, Debdolai, Segunbagicha and Arambagh canals are significant. These canals were used for water navigation, and plenty of wetland and low land in the city were used as reservoirs for rain water. During the rainy season the canals allowed the rain water make its way to the surrounding rivers. The canals prevented water logging in the city areas.



Development of Kallyanpur Manin Khal

The Drainage problems of the city have become severe caused by the failure to consider the environmental impact of the filling in of wetlands, and by implementing different projects which have narrowed and in some cases stopped the free flow of canals in some places by various developers.

Though Dhaka WASA was established 55 year ago, the drainage activity had only come within its jurisdiction 30 years ago. Drainage activity of Dhaka city was commenced in 1946 under the jurisdiction of Department of Public Health Engineering (DPHE). In March, 1989, after delivering the drainage activity to Dhaka WASA by a government gazette, a significant success was achieved in this field. Water logging has been a severe problem for a long time in Dhaka city. In the last 28 years, a combination of good management and the development of the drainage system of Dhaka city have improved.

It's a matter of great regret that disposal of different types of solid waste such as green coconut husks, empty plastic bottles, polyethylene bags and other solid wastes in to the surface drains and open canals result in obstacles to the free flow of rainwater through drainage lines. DWASA is trying to reduce this problem by cleaning canals on regular basis as well as raising the awareness among people. To increase public awareness advertisement publicity has been continuing through newspapers regularly.

Summary of the existing Drainage facilities are as follows:

Storm water drainage line (dia 450 mm to 3000 mm)	370 km
Box culvert	10.5 km
Open Channel (Khal)	78 km
Storm water pumping station	4
Kalyanpur	20 m ³ /s
Dholiaikhal	22 m ³ /s
Rampura	25 m ³ /s
Kamalapur	15 m ³ /s
Area under drainage facility	140 Sq. km

Removal of Water Congestion

Every year Dhaka WASA runs cleaning activities of its drainage lines, box culverts and canals, which prevent much of the water congestion and flooding problems associated with the rainy season.

It should be mentioned that, all the surface drains of Dhaka city and most of the internal drains are under the jurisdiction of Dhaka City Corporation (DCC), and most of the time those are filled with solid wastes. As a result, temporary water congestion occurs during heavy rainfall.

Nowadays city dwellers experience water congestion in some roads of the capital after heavy rain. It requires several hours to be drained out of congested rainwater, but that doesn't mean it is water-logging. There is no water-logging in Dhaka city rather water congestion is prevalent.

A new horizon in Water Supply in South Asia Region:

District Metered Area (DMA) Approach and Non-Revenue Water (NRW) Reduction in DWASA:

Dhaka WASA has already started in establishing DMA concept which is new in the South Asia Region and Innovative. Dhaka WASA has been providing dedicated service for safe water to the city dwellers.

The first water treatment plant was established by Nawab Khaza Abdul Ghani in Chandni ghat named “Dhaka Water Works” in the year 1874. Which is also the 1st water treatment plant in South Asia. From then the piped water supply was started in Dhaka city.

Almost 144 years ago these pipe lines was constructed and became leaky causing non-revenue water 40-45%. Due to this leakage the water demand of city dwellers cannot be fulfilled and on the other hand Dhaka water supply & sewerage authority (DWASA) are not getting the revenue also. For example if the water production is 3.0 crore liter (which can fulfill the water demand of 200,000 people) per day but due to leakage 1.35 crore liter (which fulfill the water of 90,000 people) water is unaccounted for and only 1.65 crore liter (which fulfill the demand of 1,10,000 people) can be supplied to the households. So producing 3.0 crore liter water for 2,00,000 people per day only 110,000 peoples are served. Due to this unaccounted for water it become difficult to supply water to the people causing water crisis and this become serious especially in hot season.

The situation has become challenging to meet the rapidly increasing water demand in parallel to the rapid urbanization & development of Dhaka Mega City. With course of time Dhaka WASA water supply system was moving towards unsustainable and unmanageable state due to inadequate system water pressure, use of suction pump, plenty of unidentified leakages and illegal connections, poor water quality, high system loss 40% -45%.

So it is clear that water supply system cannot be improved unless and until the Non-revenue Water (NRW) can be reduced.

For this purpose a pilot project was initiated in 2007 under a TA project by Asian Development Bank (ADB) in Manikdi area of the city where NRW was 45%. Under the project 7 km water line was rehabilitated and 500 nos. of house connection was shifted from old water line to new one. After commissioning it was observed that the NRW became 12%. The consultant found similar circumstances across the system and concluded the network needs rehabilitation to prevent significance loss of water.

To cope up the challenge to ensure safe water for the city dwellers with customer’s satisfaction in terms of water quantity, quality, system pressure; technically sustainable, economically viable approach introduced through DWSSDP in 2011. Dhaka WASA implemented the DWSSDP with financial assistance from ADB & GoB.

The project aims to ensure sustainable, more reliable and improved water supply services

through strengthening distribution networks and capacity building for better operation & management of the network by introducing of District Metering Areas (DMAs) to ensure 24/7 Pressurized water supply in the network at 1-bar or more, to reduce the water loss to 15% or less, and Improve Water Quality. District Metered Area (DMA) is a technical term to define a hydraulically isolated small area from big network system with its own water supply system and distribution network for a community which can be isolated from remaining network without affecting supply system of other areas but with facilitating surplus water to adjacent water deficit areas. Dhaka WASA started establishing DMAs in 7- Zones, with a target of about 145 DMAs. So far established 54 DMAs and remaining 91 DMAs are progressing with design & implementation. The amazing achievement of established DMAs is becoming a great focus to the customer and Dhaka WASA management.

What is DMA:

- DMA is a hydraulically isolated area.
- Interconnectivity with adjacent DMAs with provision of export or import facilities through DMA chamber.
- Conjunctive use of ground water & Surface Water.
- Controlling and monitoring water balance.
- Maintain pressurized system for 24/7 water supply
- Minimum NRW.

Criteria for selection of the DMA boundaries are:

- Selection of area for establishment a DMA
- At least one or more DTW with in the DMA
- Surveyed and Model designed for selected DMA
- Rehabilitate the existing whole network by HDPE pipe.
- Upgrade the pumping station.
- All illegal house connection must legalized.

Under Dhaka water Supply sector Development project (DWSSDP) a total of 47 nos. of DMA was established in 6 MODS Zone of D'WASA. In the project total 2456 km of water line was rehabilitated and 1,06,662 numbers of house connection was shifted. The average NRW became 5% and 5.4 million people are getting benefit from the project.

Achievements on DMA establishment are:

- Pressurized water supply for 24/7.
- All illegal house connections are legalized.
- Average Water loss (NRW) became 5%.
- Assured portable water.
- No further use of suction pump.
- Reduced electricity cost of consumers & D'WASA.
- Decreased health cost.
- Increased D'WASA Revenue.
- Water Supply provided in LIC/Slum Area.
- Easy operation & maintenance.

The achievement not only benefited to Dhaka WASA only, it is now became an Icon in the South Asia Region thus the high level delegation from India and Srilanka team visited the DMAs to share knowledge and experience to introduce the innovative concept to their water supply system. Both the teams highly appreciated the lessons they learned from the experience of DWASA and they planned to replicate the DWASA's successful experience in their countries.

The ADB mission in September 2015 noted that Dhaka is the first City in South Asia to have achieved such high level of performance in NRW reduction and 24/7 water supply and has become a role Model for other cities in the South Asia.

Dhaka WASA expressed that next challenge would be to sustain DMA Management in order to keep low NRW Level like commissioning condition.

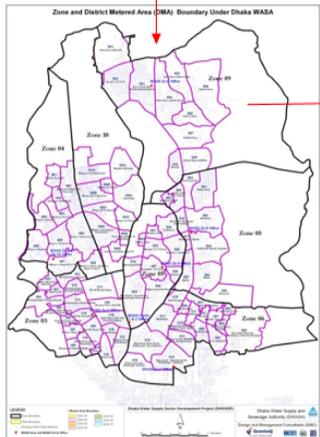
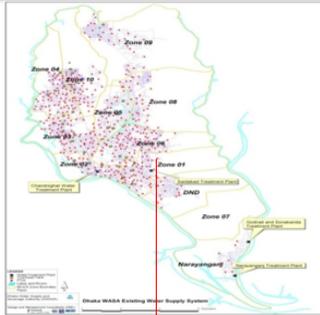
- **Pressure balancing in the water supply distribution network-** A properly designed water supply network demands a hydraulically balanced system to have reasonably uniform pressure over the entire command area of the network. This will ensure even distribution of flow to all the consumers. Present water supply distribution network lacks in this aspect. With several areas having very low pressure in the pipeline, while certain areas experience high water pressure. Consequently, flow available to the consumers is not uniform. Installation of electronically controlled pressure control devices (pressure reducing valves/pressure sustaining valves etc.) at strategic locations will improve upon the pressure distribution in the network and in turn will improve functional efficiency of the system.
- **Providing continuous (24/7) water supply-** Wherever water supply is not continuous, consumers tend to hoard water an apprehension of delay in next supply. During next time of supply, they discard the old water hoard fresh water once again. Consequently, in case of intermittent supply, water loss is much higher. DWASA has planned to undertake the project of converting present practice of intermittent water supply system to continuous pressurized 24/7 water supply system for the entire city.
- **Use of energy efficiency pumping machineries-** this will ensure reduced power consumption at different locations; in turn will reduce the recurring operational cost.
- **Water quality monitoring-** DWASA's long term goal is to monitor and network water quality in real-time, so as to detect contamination early and control its spread to

minimize impact to customers. There is a need to move away from depending on customers to act as sensors for water quality issues like discolored water, bad smell, Presence of sediments, taste etc. Furthermore in today’s volatile social-political climate, we need to be even more vigilant to deter and prevent acts of sabotage that may threaten the quality of the water supply. As a part of water quality management, DWASA plans to enhance chlorination system, regular water quality monitoring, implementation water safety plan, water quality safeguard etc.

Another technical innovative approach introduced is the Trench Less technology, which brings the tremendous quick pipe installation progress with minimum disturbance to the city dwellers & traffic and reduced cost for road cutting, damage & restoration. It added a dimension & technical viability of pipe installation in busy city like Dhaka. When all Zones of Dhaka WASA will come under DMA system it will be a great achievement in terms of technical sustainability, customer’s satisfaction, economically viable water supply system. In the course of time sustainable DMA Management capacity of Dhaka WASA will be enhanced to run the system smoothly.

The DMA approach not only facilitates Unaccounted for Water (UFW), but also helps in maintaining assets for longer duration and enables better pressure management, better water quality and continuous water supply. DMA Managers, Deputy Managers and Licensed plumbers has already deployed for individual DMAs for installations of fresh connections, carrying out necessary repairs also will be responsible for any illegal connections in the area to keep the DMA sustainable.

DMA Concept



Water Sources:

- Groundwater
- Surface-water
- Inter-DMA



water loss and house connection in DMA

Physical Water Loss of DMAs

Report as on : 30-Jun-16

Contract	DMA	End of Defect Liability period	Physical Water Loss at 10 m pressure (%)	House Connection	Population Served (About)	
ICB 02.1	501	12-Aug-15	8.81%	454	23,154	
	502	8-Mar-16	5.59%	1016	51,816	
	802	2-Nov-16	5.45%	2080	106,080	
	808	17-Aug-16	4.88%	2547	129,897	
	809	12-Aug-15	7.46%	578	29,478	
	909	18-Dec-15	11.29%	3460	176,460	
	910	26-Nov-15	5.41%	1962	100,062	
ICB 02.2	801	27-Dec-16	3.47%	2086	106,386	
	803	25-Jul-16	14.06%	3973	202,623	
	804	24-Oct-16	3.92%	6700	341,700	
	805	28-Nov-16	2.72%	4832	246,432	
	806	13-May-16	9.10%	787	40,137	
	807	19-Jan-17	4.00%	3623	184,773	
	810	3-Dec-15	9.24%	603	30,753	
	811	23-Feb-15	2.27%	578	29,478	
	ICB 02.3	503	22-Feb-17	N/A	172	8,772
		504	24-Jun-15	3.23%	707	36,057
505		2-Dec-15	3.39%	1140	58,140	
506		24-Jun-15	4.93%	334	17,034	
507		27-Jan-17	3.92%	2458	125,358	
508		9-Aug-16	2.93%	1994	101,694	
509		19-Jun-17	2.56%	4553	232,203	
510		28-Dec-16	3.43%	592	30,192	
ICB 02.4		401	17-Jan-17	3.31%	3217	164,067
	402	12-Apr-17	3.82%	3739	190,689	
	403	3-Mar-17	2.35%	2305	117,555	
	404	6-Jun-17	5.30%	5369	273,819	
	405	29-Jun-17	4.05%	4445	226,695	
	407	28-Jun-17	3.52%	3465	176,715	
	410	7-Nov-16	4.11%	1630	83,130	

ICB 02.5	1002	9-Mar-17	3.78%	2361	120,411
	1003	28-Dec-16	2.05%	196	9,996
	1004	2-Sep-16	1.59%	529	26,979
	1006	30-Jun-17	3.36%	6277	320,127
	1007	14-Mar-17	1.58%	2930	149,430
	1008	30-Jun-17	2.15%	6223	317,373
ICB 02.6	302	13-Feb-17	3.86%	1563	79,713
	308	20-Apr-17	2.53%	871	44,421
	309	30-Jun-17	5.56%	1658	84,558
	310	30-Jun-17	2.97%	2371	120,921
	314	14-Jun-17	3.05%	1378	70,278
	315	8-Dec-16	4.56%	288	14,688
	316	30-Mar-17	2.81%	601	30,651
	317	30-Jun-17	7.05%	3115	158,865
	318	30-Mar-17	4.80%	1259	64,209
	319	16-Jun-17	4.62%	2476	126,276
Note: PMU implemented DMA 617 under NCB Contract (893) and handed				1167	59,517
				106,662	5,439,762



The Hon'ble Prime Minister Sheikh Hasina receives the ADB-published book-"The Dhaka Water Services Turnaround" from Managing Director & CEO of Dhaka WASA Engr. Taqsem A Khan.



A successful meeting on water and sewerage issues was held between Managing Director & CEO of Dhaka WASA, Engr. Taqsem A Khan and President of Asian Development Bank (ADB) Mr. Takehiko Nakao Dhaka WASA on 27 February, 2018 while travelling from Narsingdi to Dhaka by train.

Water Quality Control and Monitoring in

Dhaka WASA Central Laboratory

The Dhaka Water Supply and Sewerage Authority (DWASA) is responsible for supplying quality assured water to the city dwellers. Qualitative standard of ground water and surface water supplied by Dhaka WASA is tested regularly by the Microbiology and Chemical Division (DWASA Central Laboratory) of Dhaka WASA. The standard of supplied water of DWASA meets the requirement of Bangladesh standards (ECR-1997) and World Health Organization (WHO) Guide Line Values (2004). There is a chlorination system at the source to kill/and or inactivate waterborne pathogens including removal of potential pollution in the water. In case of surface water, the water after treatment receives chlorine to ensure that it reaches to the customer's point in a safe condition.

About forty five (45) water quality parameters are conducted in DWASA Central Laboratory. Microbiological parameters such as Total coliforms, Faecal coliform, Total plate count are analyzed regularly to trace out the microbial contamination in supplied water. Different types of physico-chemical water quality parameters such as pH, Turbidity, TDS, Conductivity, Residual Chlorine, Ammonia, Nitrate, Phosphate, Sulphate, Fluoride, Chloride, Hardness, BOD, COD, TOC, Aluminium and also some important types of heavy metals like arsenic, chromium, cadmium, lead, zinc, copper, iron, manganese are analyzed regularly using UV-Visible Spectrophotometer, Atomic Absorption Spectrophotometer and TOC analyzer etc. These water quality parameters are tested for deep tube well water as well as for surface water and many others are also determined according to the requirement. In addition, the river water that is in the water treatment plant is tested at monthly basis.

To examine the quality of the supplied water, samples are taken regularly at the source and from the distribution mains, as well as from consumer reservoirs and then these water samples are tested in the laboratory of the Microbiology and Chemical Division of Dhaka WASA. If there is anomaly, necessary steps are taken as soon as possible by the concerned divisions to rectify the situation. Normally the source and distribution mains are free of contamination but in many cases the presence of harmful bacteria is observed in the underground and rooftop reservoirs of the consumers.

According to APA(Annual Performance Agreement) we are achieving the water quality testing and evaluation target since 2017.

Description of different tests of water samples in the fiscal year 2017-2018

Physico-Chemical and Bacteriological Analysis

SL. No.	Source Of Samples	No. Of Physico-Chemical Tests	No. Of Bacteriological Tests	No. Of Residual Chlorine Tests	No. Of Analytical Tests
1	Deep Tube Well	8864	712	1251	-
2	Distribution line at different holding of the consumer	1694	230	174	-
3	Underground reservoir in response to the complaints by consumer at different holding	863	152	130	-
4	Dhaka, sonskanda and Godnail Water Works	1440	36	36	-
5	Bangabhaban and WASA bhaban	1019	156	210	-
6	Deep Aquifer/Replaced Tube Well	2149	260	-	-
7	Bottle Plant (Shanti)	648	108	12	-
8	Honorable PM's Office Related Pump	330	44	22	-
Analytical Analysis					
9	Determination of Aluminium Oxide in Alum Sulphate	-	-	-	27
10	Amount Of Chlorine In Bleaching Powder	-	-	-	15
11	Dosing Test (Jar Test) of Poly Electrolyte	-	-	-	03
12	Other Analytical Tests	-	-	-	07
13	Total samples Tests	3349			
	TOTAL PARAMETER TESTS	20592			

It is to be noted that 90 percent of test results are satisfactory. Prompt action has been taken where test results are unsatisfactory.

DWASA foreign, local and in-house training courses

1 July 2017 to 30 June 2018

A total of 80 courses both home and abroad were conducted during 1 July 2017 to 30 June 2018. Of them nineteen foreign, thirteen local and forty eight in-house training courses were facilitated to the officials and staff of Dhaka WASA. The foreign courses attended by 26 officers from Dhaka WASA included M Sc in Project Management, University of RMIT, Australia, Masters of Engineering (Civil and Environmental Engineering), The University of Adelaide, Australia, Masters of Engineering (Civil and Environmental Engineering), The University of Western Ontario, Canada, Masters of Engineering (Environmental Systems Engineering), The University of Regina, Canada, Global Infrastructure Cooperation Conference (GICC) 2017, Seoul, South Korea, International Cooperation in Water Industry, Seoul, South Korea, Inspection and performance test, Turkey, Inspection and performance test of submersible pump motor, Italy, Sewage and Urban Drainage Management, Japan, Integrated Urban Water Management, Tokyo and Yokohama, Japan, Inspection and performance test, Japan, Urban Water And Sanitation Services, Singapore and Cambodia, Knowledge Sharing Program and Book Launching of "The Dhaka Water Services Turnaround", Manila, Philippines, Sustainable Urban Water and Sanitation Integrated Process, Sweden, Resilient Decision for Water Utilities and Water Related Project: The Decision Tree Framework, South Korea, The 2018 Global Water Summit, Paris, France, Sustainable Urban Water and Sanitation Integrated Process, Cambodia, Knowledge Sharing Program of Dhaka WASA the officials of Rajasthan Government, India, Factory Inspection, China.

The local training courses were Conduct and Discipline Course (2 courses), Fundamental Financial Management Course (3 courses), Training Workshop on NIS, Rain Water Harvesting System, 51st Senior Security Course, Financial Management Course, Staff Development Course, Database Application Development Using Oracle with Database Administration, Feasibility Study for Investment Project, Financial Management for Non Financial Personnel. The local training programs were performed in RPATC, WaterAid, NSI Training Institute, BCC and BIM. Numbers of participants for the local training courses were 18.

The rest of the in-house training programs are Annual Performance Agreement: WASA Perspective (2 courses), AutoCAD 3D, Basic Human Resource Management (4 courses), Basic Training on O&M of DMA (2 courses), Basic Training on O&M of DMA for APLM, Financial Management for Non Financial Executives (2 courses), Internal Audit (2 courses), Leadership Development for 21st Century (2 courses), Manner, Etiquette and Office Protocol (3 courses), Mastering Microsoft Office for Excellence, Occupational Health and Safety (6 courses), Office Management,

Online Store Inventory Management Software, Operation and Maintenance of DMA (2 courses), Operation and Maintenance of Scanner and Printer, Orientation Course (3 courses), Preparation of IT Return (3 courses), Public Procurement Management (Goods, Works and Services) (2 courses), Revenue Billing Collection and Customer Care (3 courses), Smart Data Analysis with MS Excel (3 courses), Staff Development Course (2 courses), Workshop on VFD. 1002 officers and staffs of DWASA participated in in-house training programs.

Development of Library

There are more than 700 books in the library of DWASA. Some initiatives have been taken to make this library ultra-modern, befitting the spirit of the age and attractiveness to readers by:



- Divide the library room into separate corners according to the class of the readers.
- The decoration of library room is continuing by providing separate tables to the newspaper readers, literature-novel readers and professional book/report/journal etc. readers.
- A computer corner including internet facility will be made in the Library .
- A photocopy machine will be provided in the library to avail the facility of photocopying necessary information, report etc. according to the need.
- A catalogue book will be provided to the librarian's drawer.
- A software program will be developed by the Computer Center of DWASA to organize all activities of the library of DWASA.

Service of Medical Center

There is a medical center on the 10th floor of DWASA to provide primary medical aid to the officers/staffs of DWASA and their family members.



During the office period, necessary treatment and general medicine are provided from this medical center. Two doctors are enrolled in medical services. A significant amount of patients were treated during the mentioned fiscal year.

WASA Mineral Water ‘Shanti’

The bottled water produced from the Bottled Water Supply Plant, established by DWASA’s own fund, has received acceptance from the people as best in quality.



It is mentionable that the bottled water “**Shanti**” of DWASA contributed greatly in meeting the scarcity of pure drinking water after the cyclone had affected the southern part of the country.

Research, Planning and Development Wing

▪ Development Projects of Dhaka WASA

After the successful completion of MDGs, Bangladesh as the *Signatory Country* is highly determined and committed to achieve SDGs. To achieve the water and sanitation related targets mentioned in SDGs and Vision 2021, Dhaka WASA has formulated three Master Plans namely a. Water Supply Master Plan, b. Sewerage Master Plan, c. Drainage Master Plan and has under taken Turn Around Dhaka WASA.

Dhaka WASA has implemented nine development projects on the basis of the above-mentioned Master Plans and Turn around Program of Dhaka WASA under the Annual Development Program (ADP) in 2017-18 financial year. Among the projects seven were investment projects on water supply and two projects are sewerage and drainage system.

A. Investment projects on Water Supply

- 1. Name** : ***Well Field Construction Project at Tetulzhora-Bhakurta Area of Savar Upazilla (Part-I).***
 - ☐ Duration : July' 2012 to June' 2019
 - ☐ Estimate Cost : 57300.00 Lakh Taka
 - ☐ Allocation : 5834.00 Lakh Taka
 - ☐ Release : 5834.00 Lakh Taka
 - ☐ Expenditure : 5834.00 Lakh Taka
 - ☐ Physical Progress : 100 %
 - ☐ Financial Progress : 100 %

- 2. Name** : ***Padma (Jashaldia) Water Treatment Plant (Phase-1)***
 - ☐ Duration : January' 2013 to June' 2019
 - ☐ Estimate Cost : 337517.40 Lakh Taka
 - ☐ Allocation : 96428.00 Lakh Taka
 - ☐ Release : 21357.00 Lakh Taka
 - ☐ Expenditure : 97614.24 Lakh Taka
 - ☐ Physical Progress : 101.75%
 - ☐ Financial Progress : 101.23%

3. Name : Dhaka Environmentally Sustainable Water Supply Projects.

☒ Duration : October' 2013 to December' 2019

☒ Estimate Cost : 524806.00 Lakh Taka

☒ Allocation : 42000.00 Lakh Taka

☒ Release : 42000 Lakh Taka

☒ Expenditure : 42000.00 Lakh Taka

☒ Physical Progress : 100.00 %

☒ Financial Progress : 100.00 %

4. Name : Interim Water Supply Project.

☒ Duration : March' 2015 to June ' 2019

☒ Estimate Cost : 61200.00 Lakh Taka

☒ Allocation : 23508.00 Lakh Taka

☒ Release : 23508.00 Lakh Taka

☒ Expenditure : 24508.00 Lakh Taka

☒ Physical Progress : 100.00 %

☒ Financial Progress : 100.00 %

5. Name : Saidabad Water Treatment Plant Project Phase –III

☒ Duration : July' 2015 to June ' 2020

☒ Estimate Cost : 459736.05 Lakh Taka

☒ Allocation : 3000.00 Lakh Taka

☒ Release : 3000.00 Lakh Taka

☒ Expenditure : 2837.20.00 Lakh Taka

☒ Physical Progress : 100.00 %

☒ Financial Progress : 94.57%

6. **Name** : ***Dhaka Water Supply Network Improvement Project***
- ☐ Duration : April' 2016 to December ' 2021
- ☐ Estimate Cost : 318230.00 Lakh Taka
- ☐ Allocation : 9254.00 Lakh Taka
- ☐ Release : 4801.95 Lakh Taka
- ☐ Expenditure : 4997.73 Lakh Taka
- ☐ Physical Progress : 5.00%
- ☐ Financial Progress : 54.01%
7. **Name** : ***Development of Dhaka WASA Activities in LIC Localities including Capacity Building and Financial Modeling under the framework of Saidabad Phase- III Project***
- ☐ Duration : May' 2016 to June ' 2019
- ☐ Estimate Cost : 6000.00Lakh Taka
- ☐ Allocation : 1900.00 Lakh Taka
- ☐ Release : 1900.00 Lakh Taka
- ☐ Expenditure : 1900.00 Lakh Taka
- ☐ Physical Progress : 100.00 %
- ☐ Financial Progress : 100.00%

B. Investment Projects on Sewerage and Drainage System

1. **Name** : ***Daherkandi Sewage Treatment Plant Project.***
- ☐ Duration : July' 2015 to December' 2019
- ☐ Estimate Cost : 331777.00 Lakh Taka
- ☐ Allocation : 6700.00 Lakh Taka
- ☐ Release : 6700.00 Lakh Taka
- ☐ Expenditure : 6700.00 Lakh Taka
- ☐ Physical Progress : 100.00 %
- ☐ Financial Progress : 100 %

2. Name	: Preparatory Activities of Dhaka Sanitation Improvement Project (PADSIP)
Duration	: October' 2017 to March' 2019
Estimate Cost	: 3200.00 Lakh Taka
Allocation	: 200.00 Lakh Taka
Release	: 00.00 Lakh Taka
Expenditure	: 174.41 Lakh Taka
Physical Progress	: 94.00%
Financial Progress	: 87.00 %

Progress of the projects (Financial)

1888.24 crore taka was allocated for the projects under the Revised Annual Development Program (RADP). The Government of Bangladesh (GoB) Financed taka 662.88 crore and Project Aid taka 1225.36 crore was sanctioned from the allocated money. In the said year has been released Tk. 1841.72 crore taka and Expenditure was 1865.66 crore taka. In that time the Financial Progress was 98.80% percent.

➤ Progress of the projects (Physical)

Sl no.	Name of the component	Progress (RADP)
1.	Construction & Rehabilitation of Deep Tube Well	123 no.
2.	Construction & Rehabilitation of Water Line	: 361.85 km.

In that time the Physical Progress was 88.97% percent.

To Meet water and sanitation related targets mentioned in Agenda 2030 Vision, 2021 and 7th Five Year Plan Dhaka WASA is working Proposed Projects.

Newly Approved Project :

- 'Land Acquisition and Excavation/Re-excavation of Hazaribag, Baisteki, Kurmitola, Manda & Begun Bari Khal'
- 'Expansion of Drainage Network and Development of canal in Dhaka City'

Proposed Project:

Water Supply

- Strengthening of the Existing Water Supply Distribution of Dhaka City to cope the production of Padma water treatment plant Project(Phase-I) at jasaldia.
- Well Field Construction Project Dhalla-Jamitra area of Singair Upazilla (Part-II) .

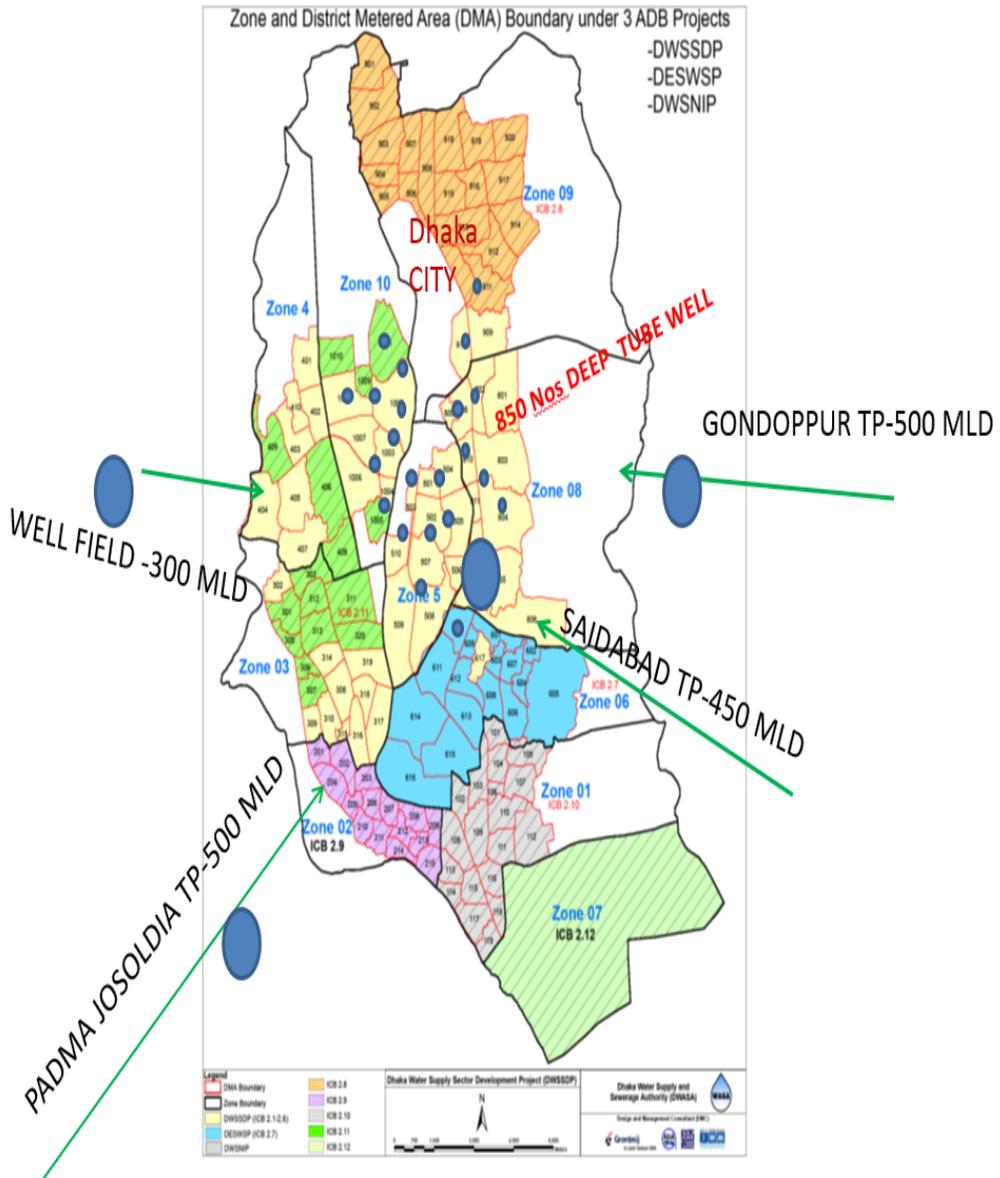
Sewerage System

- Dhaka Sanitation Improvement Project(Phase-1)
- Rayer Bazar Sewage Treatment Plant
- Construction of the Sewerage System (Sewage Collection Networks, Lift Station, Transmission Mains) and a Treatment Plant for Mirpur Catchment (Dhaka West) about with an estimated cost 2510 crore.
- Construction of Baridhara Sewerage System & Reconstruction of Gulsan, banani, Sewerage System.
- Construction of the Sewerage System (Sewage Collection Networks, Lift Station, Transmission Mains) and a Treatment Plant for Uttara Catchment (Dhaka North) about with an estimated cost 1537 crore.

Drainage System

- Up gradation of Pumping Station Kallyanpur Regulating Pond.
- Land Acquisition & Development of Acquisition portion of Hazaribagh, Basitakei Kurmitola, Manda and Bagunbari Khal about with an estimated cost 506 crore.
- DND canal Drainage Improvement Project.
- Eastern bypass Project(Dhaka DWAS Part)
- Drainage Canal Development Projects of Dhaka City.

FUTURE Source Considering DMA DESIGN



Low Income Community Program (LIC)

A New Prospect of Service to the City Dwellers

Introduction:

Dhaka Water Supply and Sewerage Authority (DWASA) is an autonomous and service oriented commercial organization. It was established in 1963 with the mandate of providing water, sanitation and drainage service to the dwellers of Dhaka city. Dhaka is now a mega city inhabited by about 15 million people. This is one of the largest cities in the world especially in the South-East Asia. DWASA's service area is extended up to Narayanganj city. It is indeed a mountainous job to provide water supply to the large population of Dhaka city including that of Narayanganj city. But DWASA has been discharging the responsibility on fighting so many challenges.

A few years back DWASA took a vow under its **"Turn Around Program"** to act as an **Environment friendly, Sustainable and Pro-People Water Service Providing Agency by 2021**. Under this program, the service quality has been improved and extended. DWASA's vision is **"to be the best water utility in the public sector of Asia"**. It has already traversed a long way in fulfilling its dream. Now DWASA produces more water than the demand. Additionally, to overcome the biggest challenge i.e. rapid depletion of ground water.

Conceptual Framework:

In fact, Dhaka WASA does the water supply for the city dwellers of Dhaka. One of the remarkable parts of Dhaka city population is of low income community which mostly familiar by slum dwellers. As per slum census in 2014 by BBS, there are around 3,399 number of slums in Dhaka city and number of slum dwellers are around 6,43,735. In most of slums of Dhaka city, there are water supply of Dhaka WASA. But this water is supplied through most of illegal water connections. Goons in the slum areas are involved in illegal water connection systems by leaking legal mains. And these goons are selling this water at high cost to community. This type of supplied water is contaminated. Because these illegal connections are made of very inferior materials. Thus, there are innumerable wholes and leakage in connection pipes. Entrance of filthy things and dirty water of drains in the WASA lines creates the water contaminated. Due to the use of dirty/contaminated water, people suffer from various diseases and becomes deprived of from getting safe water facility. On the other, though influential water vendors are making money by Dhaka WASA water, they are not paying water bills to WASA. As a consequence, Dhaka WASA is being deprived of from getting huge amount of revenue.

DWASA's mandate dictates itself to provide water supply to all the people of Dhaka city including the Low-Income Communities (LICs). The service to the latter prompts the agency to be actually **Environment friendly, Sustainable and Pro-People Water Service Providing Agency** in the city people. Very often we speak of seven reasons as to why we supply water to the LICs. The reasons are:

- 1) **Water is a human right:** The United Nations has declared water as a human right. Bangladesh is committed to this declaration. So, everybody has the right to get it;
- 2) **Revenue Potential:** In the case of illegal water business the illegal water vendors do not pay the price of water to DWASA. Thus, DWASA is deprived of due revenue. In the case of legal water, the low-income communities are ready to pay water bills to DWASA and they are also doing it. Therefore, legal water supply to the LICs brings revenue for DWASA;
- 3) **Empowerment of Women:** In the case of establishing legal water points in LICs, the women are involved in the development initiatives. They can ventilate their say in water matters. Legal water also saves time of the women to collect water. The saved time can be utilized for other income generating activities. Thus, legal water supply empowers the women of LICs that is needed for social and national development;
- 4) **Improvement of Public Health:** Safe water is a prerequisite for public health. It prevents lives from many waters borne diseases. So, safe water has no alternatives to improvement of public health
- 5) **Reduce Child Mortality rate:** The child mortality rate in Bangladesh is relatively high. One of the reasons for high child mortality rate accounts for the unavailability of clean water. But water supply reduces child mortality rate and improves children's health.
- 6) **Eliminating Illegal Water Vendors:** Many crimes happen due to illegal water supply in LICs. The mastans commit crimes in respect of illegal water business. But legal water supply eliminating Illegal Water Vendors of LICs.
- 7) **Achieving Sustainable Development Goals:** "SDG 6-Clean Water and Sanitation". So, safe water supply for the LICs people will help us to reach the SDG-6.

Timeline of the project:

DWASA erected a new horizon of service to the slum dwellers through providing legal water. DWASA started this expedition in 2005 when some local NGOs patronized by DWASA established some legal water points in slums. At the beginning the pace of the new journey was a bit slow but later on it got momentum. Now many local and international NGOs are partnering with DWASA in establishing legal water points in LICs. So far DWASA has established nearly 4312 legal water points in about 435 slums of Dhaka city. It has to cover 100% of the low-income communities with legal water by December 2018. In the race DWASA is not alone. Different partners such as World Bank, ADB, UNICEF, WaterAid Bangladesh, WSUP Bangladesh, Vitens & Evides and Local NGOs are assisting DWASA. Currently Dhaka WASA is going to install more three (3000) thousand water points in the low-income communities of Dhaka city by the assistance of European Union (EU) and French Development Agency (AFD) which will greatly help us to reach the goal by 2018. Also, UNICEF Bangladesh helps us with a small amount of money every year on installment basis to construct water points in the slum areas. If we take to the right course and work in harmony, we can surely reach the goal.

Assessed impact/expected result:

Dhaka WASA supplies water to the city dwellers including the low-income communities called slums. There are about 3400 small, medium and large slums in the city where the slum population is about 6.50 lakh as per BBS slum census 2014. Most of the low-income communities get DWASA water. But they buy it from the illegal water vendors who have penetrated DWASA water mains and taken illegal water connections. They sell the water at higher price (2-3 times DWASA rate) to the LICs. On the other hand, the supplied water is polluted because the connections are made of very inferior quality materials. As a result, there are numerous leakages that pollute supplied water. Although the illegal water vendors trade on DWASA water, they do not pay the price of water to DWASA. Thus, DWASA loses huge revenue.

The low-income communities were fully involved in the initiative. Before construction, they were intensively communicated, motivated and organized to have the legal water supply service. After construction, they have been given training to operate and maintain the water supply systems. For O & M of the system in each slum, a strong Community Based Organization (CBO) has been formed which is responsible for managing the water supply systems. Each CBO has opened a bank account where they have deposited their contribution money (depend on slum situation) for construction. This amount is quite a good sum of money that can be utilized for O&M and extension of the system as well. This can also be used for other necessary services such as sanitation and drainage. After all the communities have been empowered and capacitated to manage their own facilities. In those slums, a unique model has been established for water supply service. The water supply systems are now gaining sustainability which was our motto.

Financing model:

There are different types of financing model followed by Dhaka WASA in implementation of WASH program. Community Program and Consumer Relation (CPCR) division of DWASA generally receives from finance from different development agencies like World Bank, UNICEF, ADB, EU which are not generated from Government body and these agencies follows financing model in Public Private Partnership (PPP) approach. Thus, DWASA receives fund in PPP model and disseminate fund for WASH program by selection of NGOs.

On the other hand, DWASA also started working in govt. financing model for the same program; currently DWASA is going to implement Saidabad Water Treatment Plant (Phase-III) including LIC WASH program. CPCR division of DWASA has also replicated coordination financing model through Water Operator Partnership (WOP) funded by Vitens & Evides and DWASA.

Challenges and way forward:

DWASA has to show all out integrity in its performance although there are some challenges. DWASA needs to address these challenges. The major challenge is the lapse in procuring necessary fund in time. DWASA from its own source cannot manage the fund required for the

program. Implementation of the program largely depends on donors' timely assistance. Successful mobilization of the community to participate in the program and own the built facilities is another challenge which needs to be addressed carefully with due importance. Resistance to building legal water connections by the illegal water vendors may stand in the way of smooth execution. Eviction of the slum after the water connection is constructed and destroy water connections due to frequently fire in the slum. It is expected that DWASA would play appropriate role in combating the challenges.

Lessons Learnt:

The LIC activities carried out so far have yielded some lessons that may catalyze the future program. The lessons learnt are cited below:

- Motivational work among the slum dwellers can play an important role in changing the KAP (knowledge, attitude and practice) of the slum people. They now well understand the need and benefit of safe water (provided by DWASA). This understanding drives them to take legal connections (the illegal connections supply polluted water because of faulty construction and leakages).
- In the backdrop of legal connections, the illegal vendors now find opposition from the CBOs and the slum communities to continue their illegal business.
- The good quality water from the legal connections attracts the users to have legal connections.
- Motivational work readies the users to pay water bills.
- Total NRW of DWASA is being gradually diminished and revenue is being increased.
- Donors are coming with financial assistance to extend the LIC services.

Concluding Remarks:

Under '**Turn around Dhaka WASA**' program where mandate is no one will out of legal water coverage and slum dwellers are not out of this plan. Dhaka WASA's Community Program and Consumer Relation (CPCR) division is working restlessly to ensure the water supply rights of low income communities. Dhaka WASA's aim is to provide legal water supply for 100% of low income communities within 2018. Of course, there are challenges in implementation of the ambitious program in a relatively short period. However, DWASA will try to assemble all the requisites of the program fighting all the hindrances in the way of its mission. Every officer and employee of Dhaka WASA also believes that someday there will not be a single person with water problems left in Dhaka city. Assistance to all the stakeholders involved in the program would be ensured from DWASA.

It may be necessary to extend the time frame of Road Map implementation on practical grounds. Availability of necessary fund is the most crucial issue where DWASA has to play appropriate role. If home and foreign development organizations continue with their support, then, without a doubt, Dhaka WASA will be able to successfully reach the goal.

E-Governance in Dhaka WASA

Computerization / Automation of Dhaka WASA

In the line with the 'Digital Bangladesh - Vision 2021' initiated by the present government, Dhaka WASA took initiatives to introduce e-governance and practice in all its activities. E-governance first introduced in DWASA in 1991 through computerization of the billing system for Revenue Zone 5. Later on all zones came under this system gradually. Side by side of billing, action was taken to computerize all other activities step by step, which was started with the introduction of payroll.

Present Status

Apart from billing system other activities were automated. These are : payroll, which includes income tax, provident fund and pension, electricity and gas bill checking, certificate cases at DWASA magistrate court, renewal and demand note for new connection of private deep tube wells, were implemented over two decades.

Considering the decision of the government to make the country fully digitized, DWASA Computer Centre took immediate initiatives to automate all its activities. As a result most of the activities were automated during last three years. Main automated activities are : Accounting, Store Inventory, Personal Information Management System, Library Management, Office Management including file Tracking and Gate Pass, Residence Management, Vehicle Management, Law Management, Land Management, Training Management, Medical Management, Audit Management, Pension Management etc.

Real Time On-Line Billing / e-billing

Main activity of computerization has been the implementation of real time on-line billing / e-billing. The first time in the country any public sector organization started such an activity. The activity first started at Narayanganj revenue zone in January'2010 as pilot project and gradually rolled out to all 12 revenue zones (7 lease-outs and 5 non-lease-out) within 6 months. Under this system, following activities are implemented :

- Preparation of bills from 12 revenue zones through on-line VPN connection with DWASA central server.
- Maintain centralized database.
- Instant update of database during payment of bills.
- Consumers can pay bills at any branch of the DWASA listed banks. They can also pay bills online through SMS.
- Step is also taken so that consumer can pay bills through mobile banking / internet banking, ATM Card, Debit Card etc.
- Information regarding bill preparation and payment is sent to the consumer through SMS.

Benefit of Consumer

- Receive bills in time through SMS and on the website (www.dwasa.org.bd) including the option of printing out hardcopy of generated bills individually by each consumer.
- Payment of bills electronically and more easily with minimum time and efforts.
- Payment of bills in any branch of the country of designated 28 private banks having e-payment system.
- Lodge complaints regarding any kind of billing activity.
- Since system is on 24 x 7, consumer may get into the system round the clock.

Benefit of DWASA

- Management especially revenue and accounts division can get all kinds of billing information instantly & correctly, and also be able to monitor the system more easily.
- Reconciliation gets easy.
- Workload of all section of revenue employees is reduced to a great extent.
- Tremendous increase of revenue (both billing & collection and also surcharge).
- The image of DWASA to the consumers substantially increases due to tremendous reduction of harassment by ensuring transparency.

Apart from billing system, automation of other activities like Accounting, Electricity & Gas bill checking, Personal Management Information System etc. have been completed and running in full swing.

Following activities are also automated and operation is on going during this period.

- Land Management
- Vehicle Management
- Law Management
- Residence Management
- Fuel (Generator) Management
- Office Management
- New Connection Permission System
- Medical Software
- Store Management System

Apart from these, development of two other softwares was introduced. Out of these two, Audit Management software started its function while trial run of Pension Management and store inventory has been completed.

Besides, monthly MIS Report is published regularly for last one decade.

e-Tendering / e-GP

DWASA has already started e-tendering through CPTU since January, 2015.

e-Nothi

DWASA has already started to use e-Nothi system through A2i. Management has decided to implement 100% by June 2018

e-Recruitment

Dhaka WASA has introduced e-Recruitment system to make digital WASA as well as paperless management.

e-application

Dhaka WASA has already introduced online application systems on water, sewer connection for better service to valuable consumers.

Internet Connection

Internet was first started in DWASA about a decade ago and broadband connection with 1 mbps was established. Internet connection to all Class-I & Class-2 officers and other concerned staffs have already been provided. DWASA now starts regular correspondence like notice and minutes of meeting etc. electronically through e-mail, for which concerned officers and staff are provided official e-mail address.

Website

DWASA website was first started about 12 years ago. Various information including list of board members & DWASA officials, different official forms, citizen charter, annual & quarterly report, yearly audit report, MIS information, advertisement of all floated tenders & all appointments are included in the website. All information relating to consumer billing are updated electronically in website on-real time basis. Website is regularly updated as and when required.

Establishment of Network

Fiber Optic Network is established at DWASA HQ. Local Area Network (LAN) is established at all revenue zones and training institute. Wide Area Network (WAN) between revenue zones & HQ is established. Step is completed to establish WAN with all MODS Zones & other field offices like SOC, Store Division etc. It is planned to establish WAN with Local Government Division (LGD).

Geographical Information System (GIS)

Actual GIS activity started from April'2011. Following functions were implemented :

DMA and Water Network : A district metered area (DMA) is defined as a discrete area of a water distribution network. It is usually created by closing boundary valves so that it remains flexible to changing demands. However, a DMA can also be created by permanently disconnecting pipes to neighboring areas. Dhaka WASA has already planning to build about 144 DMA using GIS tools.

Water, Sewer and Drainage Networking Mapping: Many have characterized Geographic Information Systems (GIS) as one of the most powerful of all information technologies because it focuses on integrating knowledge from multiple sources and creates a crosscutting environment for collaboration. GIS is a system for the management, analysis, and display of geographic knowledge, which is represented using a series of information sets. In the present study, GIS will be used to organize the data for usage in water distribution networks design, and analysis. In addition, GIS is used as a tool for number of created applications for network management; such as identifying valves to be closed in case of pipe break, service area for treatment plants, and network skeletonization. Finally, GIS is used to provide graphical display of results obtained from both hydraulic simulation, and optimization models; linking tabular data with geographic locations, and graphical drawing.

Deep tubewell mapping: Deep tubewell is the only source of underground water which distributed to city dwellers. The Deep tubewell position with information has been built in GIS. Using these data, can help to provide comments before installation of new Deep Tubewells both DWASA and private owned.

Land Mapping: To proper management of WASA land, Land has been converted to digital using GIS tools.

Surface Water Transmission line Mapping : Dhaka WASA has four water treatment plant. Under those surface water treatment plant , all transmission line has been converted in digital format using GIS tools.

Base line Mapping: Baseline thematic mapping involves the compilation of varied data sources, ranging from satellite imagery to detailed information to planimetric data from the 1:250,000 National Topographic database. Base map sheets overlain by various combinations of thematic data are produced with an aim toward resource management applications. Baseline thematic mapping incorporates not only interpretations of ground cover data but topographic information such as elevation contours and planimetry to provide an optimal tool for resource management. This information may be portrayed in traditional map format, or as an image-map, which is an excellent means of presenting spatial data to resource managers and many other users. Dhaka WASA has build road, water body, house position, bridge, culvert and also other utilities network.

House Connection mapping : Dhaka WASA has been determined to be with Digital Bangladesh and progressing to step by step development to achieve the Goal. In this stage, DWASA has taken initiative to make Smart Metering. GIS mapping for House connection can be the first step to turn smart metering.

Valve Meter: Valve point are using to proper maintenance for water service area. So it's very important to know the location and related information of Valve. Mapping of Valve position has been build in GIS including information to provide good operation and maintenance.

LIC Mapping : As a part of the plan to bring all slum areas in Dhaka and Narayanganj city under water distribution service, prepare GIS database for LICs – and already implemented to Kuril at Zone 5 and Jhilpara at Zone 4 covering about 20,000 and 2554 households respectively.

Piloting Zonal Mapping: Completed a few maps as a pilot work viz. (1) water pipe line (2) service connection (3) building structure (4) mouza (5) zonal boundaries (6) water bodies etc. Billing information is being joined with these maps; as a result of which it is possible to find out connection status, non-metered household, connection type etc. for better understanding of physical features of service areas.

A few work has been done :

- Scan and digitize of about 1200 system maps on Water, Sewer and Drainage line.
- Upload of all types of maps to DWASA website.

Plans are underway to:

- Integrate whole billing system with GIS.
- **ERP :** Enterprise Resource Planning (ERP) solutions can definitely bring efficiency at DWASA in operations and all internal processes. Based on findings and recommendations, all low and medium complex solutions from an integrated ERP platform can be considered for deployment at WASA over the horizon of one year

The four major applications that will be created for the WASA include two secure applications:

- WASA/ Agency: Map Change Request app and the Water Isolation Trace app, and new connection and map updation app.
- Public-facing apps: the Water Restriction and the Outage Viewer app.
- Public-facing apps: Water alerts app/ Complaint app (no water/ muddy water/sewer over flow/missing of man hole cap, with geotagged photos and GPS coordinates
- Public-facing apps: Water bill payment app (viewing and generating the water bills and payment, with water meter reading)

Impart Training

A computer-lab has been established within Computer Centre six years ago in order to impart computer training to all class of employees gradually under various fresher and refresher courses. A good number of officers and staff were imparted computer training in this lab and also to training institute. A few workshops on e-billing/e-payment were executed to disseminate & sharing of knowledge to DWASA officers. This lab is also used for research, computer practice and computer practical examination. Training was also imparted on different aspects of GIS to concerned DWASA employees. It is planned to impart training to employees of other organizations as well.

Computer Repairs and Maintenance

DWASA possesses a good number of computer and other computer equipments like printer, scanner, UPS etc. Repairs & maintenance of these equipments are done internally, resulting savings of huge amount of public money.

Call Centre

DWASA introduces a Call Centre through outsourcing. City dwellers can get any kind of information and also lodge complain calling this centre through 16162.

Future Plan

Apart from the plans stated above, it is planned to automate some other activities like all activities of Bottle Plants, School Management, Scholarship Management etc. and also the activities of maintenance works of Civil Maintenance Division.

It is planned to establish an IP PABX system and also video conferencing soon.

Conclusion

After completion of all on-going and planned activities, the following advantage would be ensured:

- Paperless Office Management will be started.
- The motto of the government to make the country “Digital” will be established in DWASA.
- DWASA enters into modern IT technology.
- Govt. goal for making all public offices ‘Paperless’ will be achieved for DWASA.
- Above all DWASA will be one of the pioneer public sector organizations to move into modern IT technology and implement government vision.

Dhaka Water Supply and Sewerage Authority
Auditor's report and financial statements as at and for the year ended 30 June 2018

Hoda Vasi Chowdhury & Co
Chartered Accountants

Independent Auditors' Report
To the Board of Dhaka Water Supply and Sewerage Authority

We have audited the accompanying Financial Statements of Dhaka Water Supply and Sewerage Authority ('the DWASA/Authority') which comprise of the Statement of Financial Position as at 30 June 2018, and the Statement of Profit & Loss and other Comprehensive Income, Statement of Changes in Equity and Statement of Cash Flows for the year then ended together with the notes thereto.

Management's responsibility for the financial statements

The management of the company is responsible for the preparation and fair presentation of these financial statements in accordance with International Financial Reporting Standards (IFRS) and other applicable laws and regulations. This responsibility includes designing, implementing and maintaining internal control relevant to the preparation and fair presentation of the financial statements that are free from material misstatement, whether due to fraud or error, selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing (ISA). Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our qualified audit opinion.

Basis for Qualified Opinion

1. The correctness of the net book balance of Fixed Assets as of 30 June 2018 amounting to **BDT 77,762,832,426** could not be verified and confirmed by us due to the absence of any records maintained for the initial recognition of cost, existence, subsequent revaluation of value, charge of depreciation and adjustments relating to the retirement of the individual items of fixed assets;
2. In the absence of adequate records for "Materials & Supplies" as to the valuation, movement, obsolescence, etc of each category of items, and in the absence of any reconciliation of the balances as per books of Central Store with that of the Accounts Department and periodical physical verification of the inventory not being carried out, the aggregate balance of such stock on 30 June 2018 of **BDT 2,505,840,938** reported in the financial statements could not be verified;
3. (a) The correctness of the amount of revenue booked by the Accounts Department (**BDT 11,836,353,842**) and reported in the financial statements could not be ascertained due to the un-reconciled difference of such revenue with the corresponding amount shown in the books of the Revenue Department being the source document of such transactions, the quantum of which could not be ascertained, arising due to adjustments to the rates were given by the Revenue Department with retrospective effect but not regularly reported to the Accounts Department.

(b) Further, in the absence of any reconciliation of the difference of **BDT 1,887,364,049** between the books of the Revenue Department (**BDT 4,588,106,000**) and that of the Accounts Department (**BDT 6,475,470,049**) in respect of the aggregate balance of rates receivables, the correctness of

National Office : BTMC Bhaban (6th & 7th Floor), 7-9 Karwan Bazar Commercial Area, Dhaka- 1215, Bangladesh
Chattoogram Office : Delwar Bhaban (4th Floor), 104 Agrabad Commercial Area, Chattogram-4100, Bangladesh



**Hoda Vasi
Chowdhury & Co**

the balance of **BDT 6,475,470,049** appearing in the accompanying statement of financial position could not be verified by us;

4. Correctness and adequacy of the liability of DWASA in respect of its employees' pension fund reported at **BDT 5,727,377,304** and the charges therefore during the year of **BDT 2,321,119,010** in the accompanying financial statements could not be confirmed in the absence of any actuarial valuation carried out in this respect during the year;
5. The aggregate balance of grants and other funds of **BDT 62,430,018,992**, a part thereof being **BDT 17,496,205,438** relating to 36 projects carried forward from 30 June 2010 or prior thereto, and the corresponding assets reported in the accompanying financial statements could not be verified by us as the relevant information was not made available to us; and

Qualified Opinion

In our opinion, except for the effects of the matters described in the Basis for Qualified Opinion paragraph, the financial statements present fairly, in all material respects, the financial position of Dhaka Water Supply and Sewerage Authority as at 30 June 2018 and its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRS) and comply with the applicable laws and regulations.

Dhaka, 11 APR 2019


Chartered Accountants



**Dhaka Water Supply and Sewerage Authority
Statement of Financial Position
As at 30 June 2018**

	<i>Notes</i>	As at 30 June 2018 Taka	As at 30 June 2017 Taka
ASSETS			
Non-current assets			
Property, plant and equipment	4	61,995,061,944	62,534,160,672
Intangible assets	5	1,361,600	812,267
Capital work-in-progress	6	21,612,925,338	19,136,366,556
Receivables from ICB Islamic Bank Limited	7	21,039,015	21,051,475
Total non-current assets		83,630,387,897	81,692,390,970
Current assets			
Materials and supplies	8	2,505,840,938	2,017,827,316
Rates receivable	9	6,475,470,049	6,135,087,487
Advances, deposits and prepayments	10	2,341,710,461	2,525,416,902
Investment	11	1,891,831,393	1,262,633,031
Other receivables	12	56,110	56,110
Advance income tax		171,864,404	169,794,464
Cash and cash equivalents	13	2,751,856,386	2,268,881,408
Total current assets		16,138,629,741	14,379,696,718
Total assets		99,769,017,638	96,072,087,688
EQUITY AND LIABILITIES			
Capital and reserve			
Capital fund		47,393,000	47,393,000
Revaluation surplus		23,362,510,432	23,362,510,432
Accumulated loss		(1,890,785,733)	(2,172,041,891)
Total equity		21,519,117,699	21,237,861,541
Non-current liabilities			
Grants and other funds	14	62,430,018,992	59,167,052,211
Government grants for drainage maintenance	15	-	7,070,329
Deferred tax liability on revaluation surplus		7,787,503,478	7,787,503,478
Loans and borrowings (Annexure-H)	16	729,377,952	1,741,377,952
Total non-current liabilities		70,946,900,422	68,703,003,970
Current liabilities			
Loans and borrowings (Annexure-H)		-	1,007,500,000
Liabilities for expenses	17	5,923,470,888	4,243,303,002
Liabilities for other finance	18	1,193,839,673	735,874,038
Provision for audit fee		690,000	632,500
Provision for government commission		5,000,000	5,000,000
Provision for taxation	19	179,998,956	138,912,637
Total current liabilities		7,302,999,517	6,131,222,177
Total liabilities		78,249,899,939	74,834,226,147
Total equity and liabilities		99,769,017,638	96,072,087,688

These statements should be read in conjunction with the annexed notes

 Chairman
 DWASA Board

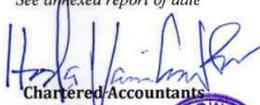
 Member
 DWASA Board

 Managing Director

 Deputy Managing Director
 (Finance)

*Auditors' Report to the Shareholders
See annexed report of date*

Dhaka, 11 APR 2019


Chartered Accountants



Dhaka Water Supply and Sewerage Authority
Statement of Profit & Loss and other Comprehensive Income
For the year ended 30 June 2018

	Notes	2018 Taka	2017 Taka
Revenue			
Water		8,782,872,184	7,865,005,304
Sewer		3,053,481,658	2,767,925,420
		11,836,353,842	10,632,930,724
Other income	20	1,187,203,814	921,168,241
Total income		13,023,557,656	11,554,098,965
Operating expenses			
Salary and wages	21	4,837,748,405	3,844,606,137
Repairs and maintenance expenses	22	4,929,602,331	4,647,459,825
Administrative expenses	23	1,328,817,257	1,174,215,580
Depreciation	4	1,533,543,913	1,478,679,883
Amortization	5	922,667	1,759,604
Provision for bad and doubtful debts	9.1	17,914,872	45,606,128
		12,648,549,445	11,192,327,157
Operating profit		375,008,211	361,771,808
Interest expense	24	-	59,849,780
Profit before tax		375,008,211	301,922,028
Income tax expense		93,752,053	75,480,507
Profit for the year		281,256,158	226,441,521

These statements should be read in conjunction with the annexed notes


Chairman
DWASA Board

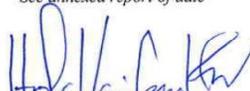

Member
DWASA Board


Managing Director


Deputy Managing Director
(Finance)

Auditors' Report to the Shareholders
See annexed report of date

Dhaka, 11 APR 2019


Chartered Accountants



Xikv I qmvi

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ক্রঃ নং	tmevi big	tmev c*ib c×iZ	ctqRbiq KIMRCI Ges cñB`ib	tmevgj- Ges cñi tkva c×iZ	tmev c*vtbi mgqmgy	iqZctB KgKZr® (big, c`ie, tclib I BigBj)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
01.	<p>* AveimK/mgwrK/ikí I ewYiR`K cikZoitb cñb I cqt msthM c*ib </p> <p>* eip/cñZombK chñq Mfií bj Ke`ictb AbgnZ c*ib </p> <p>* ew`IGj`Kiq cñb miein I m`ubtUkb e`e`ri Dbqb </p> <p>* eb`v, Liv, agñ I mgwrK Abgnbw`mn th`iKib Riáix ctqRtb A`iqx msthM I cñbi Mmo`óiv Riáix cñb miein </p> <p>* cqt j`iBb Ges t`WbR Lij I cñBc j`iBb, t`j`iK cñi`vi t`iL Zij eR®`ib`akb </p> <p>* eb`vi mgq kníi Af`šib Rj`e×Zv`ibimib cñe`ustqi gva`tg cñb miein </p>	<p>* cñb I cqt bZy I cñZb msthM/ cñieZb/`ibvšti i t`ñií Xikv I qmvi ubañi Z di`tg MñKtK Aite`b KitZ nq </p> <p>* MñiKi Aite`b cñBi ci msakó gWñ tRiv Zv`ivR`^ tRitb tctY Kti`ivR`^ Audm ntZ Aite`bKvixi`ubKU KZet`ñi t`br`civ br`m`úik`cñZie`b tbq`nq </p> <p>* msakó ivR`^tRitbi cñZie`b (etKq`bv`_vKtj) cñBi ci gWñ tRiv`mti Rigtb Z`šicme`ñinidñi gZiqZ`m`ñj Z cñZie`b`ñlj Kti </p> <p>* mti Rigtb Z`šicñZie`b`civ qri ci gWñ tRiv`ij Audm`ñWg`ú`ibvU Bmý Kti </p> <p>* cñi tkvaz`ñWg`ú`itvU`itvU`i Kic`civ qri ci tRiv`ij Audm`msthM`AbgnZc`I Rvix Kti </p> <p>* Zric`ñiZ MñiKi msthM`c*ib Kiv`nq </p>	<p>* Aite`b dig`ciY Kti MñKtK Ragi`malikana sangrañ PñwZ`_`I`ctqYc`I`w,`Oie`BZ`w`mZ`wqZ`Kti msakó tRitbi`ubefñx`ctKŠkj`xi`Bti`ñlj`KitZ`nq </p> <p>* fionlqv/ A`iqx Aite`bKvixi`t`ñií Aite`b`i`minZ`gnj`K`ntZ`msthM`Mñtbi`ñjgZv/`Abic`e`c`I`Rgr`ñ`iZ`nq </p> <p>* Af`šix`Y`cñe`š`mñ`÷`igi`bKk`mn`Bgi`Z`bKk`v`Aite`b`i`mñ`_`ñlj`KitZ`nq </p>	<p>cñbi j`iBbi bZy/cñZb msthM`i t`ñií Xikv I qmvi ubañi Z Aite`b`di`igi`Rb`msakó MñKtK`500/-`cñBcZ`UñKv`cñi tkva`KitZ`nq </p>	<p>30 (ñk) `ñ`b</p>	<p>* ubefñx`ctKŠkj`x, gWñ tRiv-1, Xikv I qmvi tclit 9358397 (Audm) 01819-229419 (tmj) </p> <p>* ubefñx`ctKŠkj`x, gWñ tRiv-2, Xikv I qmvi tclit 9016016 (Audm) 01819-229815 (tmj) </p> <p>* ubefñx`ctKŠkj`x, gWñ tRiv-3, Xikv I qmvi tclit 8100010 (Audm) 01819-229418 (tmj) </p> <p>* ubefñx`ctKŠkj`x, gWñ tRiv-4, Xikv I qmvi tclit 900519 (Audm) 01819-229417 (tmj) </p> <p>* ubefñx`ctKŠkj`x, gWñ tRiv-5, Xikv I qmvi tclit 9899338 (Audm) 01819-229416 (tmj) </p> <p>* ubefñx`ctKŠkj`x, gWñ tRiv-6, Xikv I qmvi tclit 7191569 (Audm) 01819-229420 (tmj) </p> <p>* ubefñx`ctKŠkj`x, gWñ tRiv-7, Xikv I qmvi 01706-311472 (tmj) </p> <p>* ubefñx`ctKŠkj`x, gWñ tRiv-8, Xikv I qmvi tclit 8834239 (Audm)</p>

ক্রঃ নং	নাম	ঠিকানা	স্বাক্ষরিত/স্বাক্ষরিত নাম	স্বাক্ষরিত/স্বাক্ষরিত নাম	স্বাক্ষরিত/স্বাক্ষরিত নাম	যোগাযোগের সংখ্যা
(1)	(2)	(3)	(4)	(5)	(6)	(7)
						01819-556318 (মজ) * উদ্দেশ্য চাক্ষুঃ, গুল্ম তরিত-9, খিঃ লিঃ ফোন 7911910 (আঃ) 01819-208902 (মজ) * উদ্দেশ্য চাক্ষুঃ, গুল্ম তরিত-10, খিঃ লিঃ ফোন 9005948 (আঃ) 01817-144495 (মজ) * উদ্দেশ্য চাক্ষুঃ, ব্রিঃমাঃ গুল্ম, খিঃ লিঃ ফোন 01681-169845 (মজ) * জৈঃ চাক্ষুঃ, তঃ(লিঃ) লিঃ খিঃ লিঃ ফোন 8124333(আঃ), 01819- 225015(মজ)
02.	মিঃ লিঃ	কঃ লিঃ	মিঃ লিঃ	মিঃ লিঃ	মিঃ লিঃ	1) বিঃ লিঃ ফোন 7550722 joynaldcro@yahoo.com 2) বিঃ লিঃ ফোন 7315249
03.	বিঃ লিঃ	কঃ লিঃ	মিঃ লিঃ	মিঃ লিঃ	মিঃ লিঃ	siddiquewasa@yahoo.com 3) বিঃ লিঃ ফোন 8100503 ppidwasa_z3@yahoo.com 4) বিঃ লিঃ ফোন 9003787 ppidwasa_z4@yahoo.com
04.	বিঃ লিঃ	কঃ লিঃ	মিঃ লিঃ	মিঃ লিঃ	মিঃ লিঃ	বিঃ লিঃ ফোন 9003787 ppidwasa_z4@yahoo.com

ক্রঃ নং	ইমেইল বিগ	ইমেইল চিহ্ন	চিহ্নিত ক্রমিক নং	ইমেইল - নাম	ইমেইল সংক্রান্ত	সংক্রান্ত (বিগ, চিহ্ন, তথ্য ইত্যদ্য)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
						5/ Rbie tgrt bmmi Dui b, cki e e icK, ij R AiDU i iR iRib-5, XiKv I qmvi/ tchbt 9899339/ ppidwasa_z5@yahoo.com
05.	গাহকের বিল সংক্রান্ত আইডি নং	মিনিকি মগ'বি চিহ্ন মগ'বি ক্রমিক নং	--	ইমেইল - নাম	ইমেইল সংক্রান্ত (Nature) আইডি নং	
06.	মিনিকি পানি সংক্রান্ত	কিউডিবি ইমেইল	মিনিকি ক্রমিক নং	ইমেইল - নাম	ইমেইল সংক্রান্ত	6/ Rbie Gg G gij K, cki e e icK, ij R AiDU i iR iRib-6, XiKv I qmvi/ tchbt 7193490/ ppidwasa_z6@yahoo.com 7/ Rbie B`Rr msn, i iR iRib-7, XiKv I qmvi/ tchbt 7550222/ indra.phy@gmail.com 8/ Rbie tgrt kivi i iR iRib-8, XiKv I qmvi/ tchbt 9861481/ ppidwasa_z8@yahoo.com 9/ Rbie kigij Bmj ig Lib, cki e e icK, ij R AiDU i iR iRib-9, XiKv I qmvi/ tchbt 58957492/ ppidwasa_z9@yahoo.com 10/ Rbie tgrt kmdKy Bmj ig, cki e e icK, ij R AiDU i iR iRib-10, XiKv I qmvi/ tchbt 9027272 ppidwasa_z10@yahoo.com 11/ Rbie tgrt AeyimC, i iR iRib-11, XiKv I qmvi/ tchbt 7646100/ sayeed67@yahoo.com

ক্রঃ নং	তথ্য বিবরণ	তথ্য বিবরণ	চুক্তি/স্বাক্ষরিত স্বাক্ষরিত	তথ্য বিবরণ	তথ্য বিবরণ	স্বাক্ষরিত স্বাক্ষরিত (বিবরণ, চুক্তি, তথ্য বিবরণ)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
						10 Rbie igrt Ziberi Amtg` mmi Kx, ivR`^ KgRZr(m.Gd), tclbt 8180136/ tanbir_a.siddiqui@gmail.com

2.2 তথ্য বিবরণ

ক্রঃ নং	তথ্য বিবরণ	তথ্য বিবরণ	চুক্তি/স্বাক্ষরিত স্বাক্ষরিত	তথ্য বিবরণ	তথ্য বিবরণ	স্বাক্ষরিত স্বাক্ষরিত (বিবরণ, চুক্তি, তথ্য বিবরণ)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	mi Kwii / Avav mi Kvix / `vqZkvmmZ/ temi Kwii ciZovtb cimb l cqt msthvM c² vb	* cimb l cqt bZly l cjuZb msthvM/ cwieZB/`vbrškti i t¶t¶ XvKv l qmvi mbafii Z di tg MinKtK Avte`b KitZ nq * MinKtKi Avte`b cimb ci msukó gWln tRvb Zv ivR`^tRvtb tci Y Kti ivR`^Amclm ntZ Avte`b Kvixi mbKU KZE:t¶i t`br-cvl br m=útk@cizte`b tbrq nq * msukó ivR`^tRvtbi cizte`b (etKqv br _vktj) cimb ci gWln tRvb mti Rigtb তদন্তক্রমে সুনির্দিষ্ট gZvgZ m=ij Z cizte`b `vLj Kti * mti Rigb Z`šl cizte`b cvl qri ci gWln tRvbij Amclm vWgvÚ tbrU BmyKti * cwi tkvaZ vWgvÚ tbrUi Kuc cvl qri ci	* Avte`b dig c-Y Kti MinKtK Rig gvij Kvbr সংক্রান্ত PwinZ Z`_ l cgvYcTvw, One BZ`vw mZ`vqZ Kti msukó tRvtbi ubefix c¶Kškjxi `Bti `vLj KitZ nq * fvonUqv/ A`lqv Avte`b Kvixi t¶t¶ Avte`bi mmZ gvij K ntZ msthvM Mhthi ¶lgZv / AbrvciEcT Rgv v`tZ nq * Af`šlixY cmm\$ vmt`-tgi bKkvmn BgviZ bKkv Avte`bi mvt_ `vLj KitZ nq	cmbi jvbtbi bZly/cjuZb msthvMi t¶t¶ XvKv l qmvi mbafii Z Avte`b di tgi Rb`msukó MinKtK 500/- (cvEkZ) UvKv cwi tkva KitZ nq	30 (vLk) v`b	msukó tRvtbi ubefix c¶Kškjxi, XvKv l qmvi

		†Rvbj Awcm msthM AbgZcĪ Riv Kti * ZrtcĪ†Z MntKi msthM c²vb Kiv nq				
2	MntKi mbKU wej tcŠQ†bv	KwúDUvi †Rv†i†UW wej mba†i Z QtK MntK B†°Q Kij XvKv I qmvi I †qe mBU www.dwasa.org.bd n†Z WDb†j W Kti I mb†Z cv†ib	MntKi †Kvb KvMRCĪ ctq†Rb tbB MntKi emvq tcŠQ†bv nq	†Kvb gj- cwi†kva KijZ nq bv	wej c²Z Kti 10 w†bi g†a MntKi mbKU tcŠQ†bv nq	mswkó †Rv†bi Dc- c†vb ivR-†KgRZv ivR-†KgRZv XvKv I qmvi
3	bv-†vex cZ²qbcĪ	KwúDUvi †Rv†i†UW cZ²qbcĪ	MntKi †Kvb KvMRCĪ ctq†Rb tbB MntKi emvq tcŠQ†bv nq	†Kvb gj- cwi†kva KijZ nq bv	wMZ cyAKv eQ†i i bv-†vex cZ²qbcĪ cieZ†m†bi 30 R†bi g†a	
4	e†Kqv cZ²qbcĪ	KwúDUvi †Rv†i†UW cZ²qbcĪ	MntKi †Kvb KvMRCĪ ctq†Rb tbB MntKi emvq tcŠQ†bv nq	†Kvb gj- cwi†kva KijZ nq bv	wMZ cyAKv eQ†i i e†Kqv cZ²qbcĪ cieZ†m†bi 30 R†bi g†a	
5	MntKi wej সংক্রান্ত Aw†thvM mb-†u†E	MntKi mgm†vi cKZ mg†v†b Kiv nq MntK B†°Q Kij I qmvi †nj c j vBb 16162 †Z Kj Kti †mev †c†Z cv†ib	--	†Kvb gj- cwi†kva KijZ nq bv	mgm†vi cKZ (Nature) Aby††i 01 w†b n†Z 15 w†b	
6	MntKi Pw†vi †c†††Z W†c† †KU wej c²vb	KwúDUvi †Rv†i†UW wej mba†i Z QtK MntK B†°Q Kij XvKv I qmvi I †qe mBU www.dwasa.org.bd n†Z WDb†j W Kti I mb†Z cv†ib	MntKi †Kvb KvMRCĪ ctq†Rb tbB	†Kvb gj- cwi†kva KijZ nq bv		

2.3 Af'širv tmev t (ckumb uefM)

ᄃᄂ bs	tmev i big	tmev c* vb c×uZ	c†qvRbxq KvMRcĪ Ges c†vB`vb	tmevgj- Ges cui †kva c×uZ	tmev c* v†bi mgqmıgv	vıqZc†B KgRZı ^s (big, c`ue, tdrv I B†gBj)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. %bıgvĒK Qııı Avte`b ıv`uıĒ	bıı /Avte`b Ab†gv`†bi gva`tg	-	-	Zıv†ııvK / 1 ıı`b	1 e`e`ıvcbı cııı Pıj K, XıKv I qıııı 2 Dc-e`e`ıvcbı cııı Pıj K (ckıımb), XıKv I qııııı 3 mııPe, XıKv I qııııı 4 Dc-mııPe, XıKv I qııııı	
2. AııRZ Qıııı Avte`b ıv`uıĒ	bıı_i gva`tg Ab†gv`b	c†ııvR`††ıı c†qvRbxq KvMRcĪ thgb- †gvı†Kj mb` c†qvRb nq	-	5-10 ıı`b	e`e`ıvcbı cııı Pıj K, XıKv I qııııı	

ᄃᄂ bs	tmev i big	tmev c* vb c×uZ	c†qvRbxq KvMRcĪ Ges c†vB`vb	tmevgj- Ges cui †kva c×uZ	tmev c* v†bi mgqmıgv	vıqZc†B KgRZı ^s (big, c`ue, tdrv I B†gBj)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
3. ııRııcdııÜ Aıııg	Avte`b Ab†gvıı bıı_†Z Ab†gv`†bi gva`tg	-	-	5-10 ıı`b	1 e`e`ıvcbı cııı Pıj K, XıKv I qııııı 2 Dc-e`e`ıvcbı cııı Pıj K (ckıımb), XıKv I qııııı	

(c†KŠkj uefM)

4. %bıgvĒK Qıııı Avte`b ıv`uıĒ	bıı /Avte`b Ab†gv`†bi gva`tg	-	-	Zıv†ııvK / 1 ıı`b	1 cävB c†KŠkj x, XıKv I qııııı 2 AııZııı ³ cävB c†KŠkj x(Aııııııı), XıKv I qıııııı 3 ZĒıııııı c†KŠkj x (mKj), XıKv I qıııııı 4 ıııııııı c†KŠkj x (mKj), XıKv I qııııııı
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(ivR`^efM)

5.	um Gj Qydi Avte`b wb`uvE	bu_/Avte`b Abjgv`tbi gva`tg	-	-	Zvr`jwYK / 1 w`b	1 c`avb ivR`^KgRZi, c`avb ivR`^KgRZiP`Bi 2 Dc-c`avb ivR`^KgRZi, ivR` tRvb-1 3 ivR`^KgRZi, ivR`^tRvb-2 4 ivR`^KgRZi, ivR`^tRvb-7 5 ivR`^KgRZi, bviqbMÄ ivR`^tRvb 6 ivR`^KgRZi, ivR`^tmUlj dvskb
----	--------------------------------	--------------------------------	---	---	------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

2.4 AvI Zvaxb Awä`Bi/ms`v/Ab`vb` c`Zövb KZR.c`E tmev| msh` Kiv ntj v|

3) Avcbri KvtQ Avgit`i cZ`vkv

ক্রমিক	c`Zk`Z / Kv`LZ tmev c`wBi j`j` Ki Yiq
1	`qs m`uY`Avte`b Rgv c`vb
2	যথাযথ প্রক্রিয়ায় প্রয়োজনীয় ফিস পরিশোধ করা
3	gvV ch`q cwi`k`bi mgq Min`Ki mmeR mn`thwMZv c`vb
4	c`qvRbxq KvMRc`I Rgv c`vb Kiv
5	wb`ö mg`q Avte`b c`I Rgv t`qv
6	mv`jv`Zi Rb`wb`w`i Z mg`qi c`teB Dcw`Z`vKv

4) **আবস্থার পরিচালনা (GRS)**

তবে চমৎকার আশে নতুন বিজ্ঞপ্তি প্রকাশিত হবে। মতামতের ক্ষেত্রে বিবেচনা করা হবে।
 তদন্তের জন্য প্রয়োজনীয় তথ্যের আবেদন করা হবে।

ক্রমিক	কলমের নাম বিভাগ	কর্মসূচীর নাম বিভাগ	সেবার বিবরণ	সেবার নাম
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