

**MINISTRY OF SANITATION AND WATER RESOURCES
COMMUNITY WATER AND SANITATION AGENCY**



SECOND QUARTER PROGRESS REPORT

APRIL 1 TO JUNE 30, 2019

THE CHIEF EXECUTIVE

**PRIVATE MAIL BAG
KOTOKA INTERNATIONAL AIRPORT
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ACRONYMS

3-DWSS	3-Districts Water Supply Scheme
AF-SRWSP	Additional Financing - Sustainable Rural Water and Sanitation Programme
AOT	Abokobi-Oyarifa-Teiman
AR	Ashanti Region
BAR	Brong Ahafo Region
CERSGIS	Center for Remote Sensing and Geographic Information Services
CLTS	Community Led Total Sanitation
CR	Central Region
CSO	Civil Society Organisation
CWSA	Community Water and Sanitation Agency
DA	District Assembly
DCD	District Coordinating Director
DCE	District Chief Executive
DPC	Disaster-prone Community
DSDP	Debt Swap for Development Programme
DSDP	Debt Swap for Development Programme
DWSS	Districts Water Supply Scheme
EPA	Environmental Protection Agency
ER	Eastern Region
GAR	Greater Accra Region
GHS/GHC	Ghana Cedis
GOG	Government of Ghana
GWCL	Ghana Water Company Limited
HQ	Head Quarters
IDA	International Development Association (of the World Bank)
IMC	Interim Management Committee
IMC	Interim Management Committee
IT	Information Technology
KDWSEP	Kweiman-Danfa Water Supply Expansion Project
KDWSS	Kweiman-Danfa Water Supply Scheme

KVIP	Kumasi Ventilated Improved Pit
KWMA	Kwahu West Municipal Assembly
MDAs	Ministries, Departments and Agencies
MDCDs	Municipal and District Coordinating Directors
MMDAs	Metropolitan, Municipality & District Assemblies
MMDCEs	Metropolitan, Municipality & District Chief Executives
MSWR	Ministry of Sanitation and Water Resources
NEDCO	Northern Electricity Company Development Company
NGOs	Non-Governmental Organisations
NR	Northern Region
ODF	Open Defecation Free
OWSS	Osudoku Water Supply Scheme
PDS	Power Distribution Service
PSO	Private Sector Organizations
RCC	Regional Coordinating Council
RI	Rotary International
RWST	Regional Water and Sanitation Team
SDG	Sustainable Development Goal
SIF	Social Investment Fund
SRWSP	Sustainable Rural Water and Sanitation Programme
UER	Upper East Region
UN-Habitat	United Nations Human Settlements Programme
UNICEF	United Nations Children's Fund
USA	United States of America
USAID	United States Agency for International Development
UWR	Upper West Region
VIPs	Ventilated Improved Pit Latrines
VR	Volta Region
VRA	Volta River Authority
WASH	Water, Sanitation and Hygiene
WATSAN	Water and Sanitation

WCs	Water closet
WR	Western Region
WSIP	Water Supply Improvement Project
WSMS	Water Systems Management Staff
WSMT	Water and Sanitation Management Team

EXECUTIVE SUMMARY

As part of efforts to fulfill the Agency's mandate of delivering safe water and related sanitation services to rural communities and small towns across the country, some major activities were carried out during the quarter under review. This report therefore presents an outline of activities carried out by the Agency and the achievements made under the set indicators (*financial & economic, efficiency/productivity, dynamic/management and operational/technical*). The report further highlights achievements made by the Agency towards the management of piped water systems and achievements/status of on-going projects.

CWSA is currently managing 125 small town water systems across the country. Baseline survey for some piped water systems were completed during the quarter. Extensive rehabilitation was carried out in almost all the piped water systems under CWSA management. Water safety plans were prepared and executed for some water systems. To improve water safety and quality, piped water systems and borehole sources were disinfected. The Agency extended the installation of bulk and service water meters to new piped water systems which helped in monitoring and tracking of water production, distribution and consumption.

The Agency generated 65.1% (**GHS43,088,634.00**) of its target income of **GHS64,218,077.00** resulting in a shortfall of 34.9% (**GHS21,129,443.00**). During the quarter, 126 boreholes were drilled against a target of 48 whereas five (5) *boreholes with handpumps* were installed against a target of 48. Also 6,223 *household latrines (VIPs)* were constructed against a target of 3,000. *Open Defecation Free* was achieved in 202 communities while construction of thirteen (13) *institutional latrines* were completed within the quarter. Two (2) out of forty-one (41) WSMTs (point sources) were formed and fifteen (15) trained though there was no target.

The Agency engaged with its stakeholders which included District Assemblies, Traditional Authorities, Community Members, Civil Society Organizations, Development Partners (DPs) and Private Sector Organizations in implementing rural WASH projects across the country. Implementation activities continued for the Additional Financing for Sustainable Rural Water and Sanitation Project (AF-SRWSP) funded by the International Development Association (IDA) of the World Bank; Rotary International/USAID WASH Project; UNICEF/GoG WASH Project; UN-

Habitat WASH in Disaster Prone Communities (DPC); Water Supply Improvement Project (WSIP) of the Ghana-Spain Debt Swap for Development Programme (DSDP); and Social Investment Fund (SIF) Project among others.

There is currently a total staff of one thousand and fifty-two (1,052) which comprise forty (40) Head Office staff, one hundred and sixty- nine (169) Regional Office staff, five hundred and five (505) Water System Management staff and, three hundred and thirty-eight (338) Auxiliary staff. The Agency has a staff deficit of twenty-seven (27) at the Head Office and Regional Office levels. A two-day training program was organized to improve WSMS and regional staff capacity in the management of the piped water systems in each of five (5) regions. This include Volta, Central, Western, Eastern and Greater Accra Regions respectively. A three-day (10th-13th June 2019) training took place at NODA Hotel, Ejisu in Ashanti Region on the Installation and Operation of the Billing Software for piped water systems. Some staff participated in a training workshop on map production using GIS at CERSGIS-University of Ghana, Accra. Some selected staff embarked on a four-day (28th-31stMay 2019) site visit to projects executed by BIGEN AFRICA (PTY) LIMITED in South Africa.

Challenges encountered by the Agency which obstructed its capacity to effectively deliver WASH services to rural communities and small towns include; old age of most water systems, agitation and reluctance of some community leaders to hand over water systems to CWSA to manage, inability to meet water demand in some communities, inability to determine non-revenue water due to inadequate supply of bulk meters and malfunctioning of available ones, huge arrears of electricity bills left behind by the former managers of the pipe water systems, high iron content in ground water and erratic power supply.

The Agency would devise strategies to safeguard control panels against power fluctuations and enhance the skills of its technical staff. The Agency would continue to engage and dialog with chiefs and key opinion leaders who are reluctant to hand over water systems. Funds would be mobilized and made available for the operation and maintenance of water systems.

1.0 INTRODUCTION

The Community Water and Sanitation Agency (CWSA) is mandated by an Act of Parliament, (Act 564), 1998, to facilitate the provision of sustainable safe water and related sanitation as well as hygiene promotion services to rural communities and small towns in Ghana. The commitment of the Agency to fulfil its mandate, achieve the government's 'Water for All Agenda' and the Sustainable Development Goal (SDG) six (6) forms part of the ongoing reforms in the Rural Water Sanitation and Hygiene (WASH) sub-sector.

The report gives a detailed account of activities undertaken by CWSA in the second quarter of 2019 towards the fulfilment of the Agency's mandate. The report covers a comparative analysis of achievements made against set targets in WASH services delivery, capacity building, the rural water sub-sector reform programme as well as income and expenditure of the Agency. Specific issues presented in the report include achievements of key performance indicators, personnel issues, status of the reforms and ongoing WASH projects in the various regions, major challenges encountered by the Agency and proposed measures for improving service delivery in the rural WASH sub-sector.

2.0 PERFORMANCE OF KEY INDICATORS

This aspect of the report assesses the performance of CWSA in the second quarter of the year 2019. The assessment covers Financial/Economic indicators, Efficiency/Productivity indicators and Dynamic/Management Improvement indicators as stated in the Agency's 2019 performance contract signed with the Government of Ghana (GoG).

2.1. INDICATORS ON CWSA REFORM PROGRAM

The following sub-sections contain a detailed assessment of the Agency's performance indicators.

2.1.1 Performance of Financial and Economic Indicators

The Agency could not meet its income target for the quarter under review. An income of **GHS43,088,634.00** was realized during the quarter which is less than the target of **GHS64,218,077.00** resulting in a shortfall of **GHS21,129,443.00**. Below are details of the financial analysis.

Table 1.1: Performance of Financial/Economic Indicators for the Second Quarter, 2019

RECEIPTS	ANNUAL BUDGET (GHC)	SECOND QUARTER BUDGET (GHC)	YEAR TO DATE BUDGET (GHC)	SECOND QUARTER ACTUAL (GHC)	YEAR TO DATE ACTUAL (GHC)	YEAR TO DATE VARIANCE (GHC)
Revenue from sale of water	24,861,854	6,215,464	12,430,927	3,687,645	7,453,078	4,977,849
Other Income	1,458,418	364,605	729,209	1,135,382	1,501,369	(772,160)
Government of Ghana Subsidy	37,395,719	9,348,930	18,697,860	2,881,701	4,531,702	14,166,158
Donor Inflow	180,821,493	45,205,373	90,410,747	32,032,680	57,951,063	32,459,684
Funding from GWCL	12,334,824	3,083,706	6,167,412	3,351,226	6,434,932	(267,520)
TOTAL	256,872,308	64,218,077	128,436,154	43,088,634	77,872,145	50,564,009

2.1.2 Performance of Efficiency and Productivity Indicators

2.1.2.1 Water Supply Systems

During the quarter, 126 boreholes were drilled against a target of 48 whereas five (5) out of forty-eight (48) *boreholes were installed with handpumps* (Refer to Table 1.2). Feasibility studies was conducted on seven (7) piped water systems within the quarter. Indicators under *new limited mechanized systems, rehabilitation of small communities piped systems, small towns piped systems and GWCL piped connections* recorded zero.

2.1.2.2 Sanitation Indicators

In the quarter under review, 6,323 *household latrines* were constructed against its target of 3,000. *Open Defecation Free* was achieved in 202 communities while construction of thirteen (13) *institutional latrines* were completed within the quarter.

2.1.2.3 Community Capacity Building Indicators

Two (2) out of forty-one (41) WSMTs (point sources) were formed of which fifteen (15) were trained though there was no target. No new water systems and communities was added under

CWSA management and the National CWSA Programme respectively. The Table below presents specific details on water supply systems, sanitation and community capacity building.

Table 1.2: Performance Indicators and Achievements for the Second Quarter, 2019

Performance Criteria	Unit of Measurement	2019 Annual Target	Q2 Target	Q2 Achievement	Variance for Qtr. 2	% Achieved in Qtr. 2	Cumulative results January to June	
							Target	Achievement
B. EFFICIENCY AND PRODUCTIVITY INDICATORS								
Water Supply Systems								
New Boreholes Constructed								
1. Boreholes sites selected	No.	189	48	110	62	229	95	110
2. Successful boreholes drilled	No.	189	48	126	78	263	95	141
5. Successful boreholes with hand pumps installed	No.	189	48	5	(43)	10	95	30
New Small Communities Piped Systems Constructed								
1. Systems with feasibility studies completed	No.	0	0	7	7	0	0	7
2. Systems with designs completed	No.	0	0	0	0	0	0	0
3. Systems contracted out	No.	0	0	0	0	0	0	0
4. Systems Practically completed	No.	0	0	0	0	0	0	0
Small Towns Piped Systems Constructed								
1. Systems with feasibility studies completed	No.	29	7	0	(7)	0	36	0
2. Systems with designs completed	No.	29	7	0	(7)	0	36	0
3. Systems contracted out	No.	29	7	0	(7)	0	36	0
4. Systems practically completed	No.	14	4	0	(4)	0	18	0
New Limited Mechanized Systems Constructed								
1. Systems with feasibility studies completed	No.	0	0	0	0	0	0	0
2. Systems with designs completed	No.	0	0	0	0	0	0	0
3. Systems contracted out	No.	0	0	0	0	0	0	0
4. Systems practically completed	No.	0	0	0	0	0	0	0

Performance Criteria	Unit of Measurement	2019 Annual Target	Q2 Target	Q2 Achievement	Variance for Qtr. 2	% Achieved in Qtr. 2	Cumulative results January to June	
							Target	Achievement
Small Communities Piped Systems Rehabilitated								
1. Systems with feasibility studies completed	No.	0	0	0	0	0	0	0
2. Systems with designs completed	No.	0	0	0	0	0	0	0
3. Systems contracted out	No.	0	0	0	0	0	0	0
4. Systems practically fully completed	No.	0	0	0	0	0	0	0
Small Towns Piped Systems Rehabilitated								
1. Systems with feasibility studies completed	No.	0	0	0	0	0	0	0
2. Systems with designs completed	No.	0	0	0	0	0	0	0
3. Systems contracted out	No.	20	5	0	(5)	0	10	0
4. Systems practically fully completed	No.	20	5	0	(5)	0	10	0
GWCL Piped Connections Completed								
1. Systems with designs completed	No.	9	2	0	(2)	0	2	0
2. Systems contracted out	No.	9	2	0	(2)	0	2	0
3. Pipe connections to communities completed	No.	9	2	0	(2)	0	2	0
Sanitation Facilities								
CLTS Activities								
1. Communities to Enter	No	141	36	297	261	825	71	374
2. Open Defecation Free Communities	No	450	100	202	102	202	200	279
Household Latrines (VIPs) Constructed	No.	14,000	3,000	6,323	3,323	210	6,000	7,401
Institutional Latrines Constructed	No.	0	0	13	13	0	0	13
1. Latrines under construction	No.	0	0	0	0	0	0	3
2. Latrines (KVIPs) completed	No.	0	0	0	0	0	0	98
Community Capacity Building Activities								
1. New Communities in National CWSA Programme	No.	0	37	0	(37)	0	37	12
2. WSMTs formed ** (point sources)	No.	148	41	2	(39)	4.8	78	26

Performance Criteria	Unit of Measurement	2019 Annual Target	Q2 Target	Q2 Achievement	Variance for Qtr. 2	% Achieved in Qtr. 2	Cumulative results January to June	
							Target	Achievement
3. WSMTs trained (point sources)	No.	161	0	15	15	0	40	15
i. Pre-construction stage	No.	0	0	0	0	0	0	5
No. of new Pipe systems under CWSA management	No.	30	0	0	0	0	8	0

*WSMTs in place refers to the number of Water and Sanitation Management Teams comprising “a set of people elected to be in charge of a point water facility (borehole)” and not the individual members in the Team.

***Categories under WSMTs trained are explained as follows:

Pre-construction training: Mobilization/Planning;

Post-construction training: User education/Follow-up (O&M) in both cases refers to the number of Committees and not the individual members.

2.1.3 Performance of Dynamic/Management Improvement Indicators

Table 1.3 shows the analysis of dynamic and management improvement indicators for the second quarter of 2019.

Table 1.3: Performance of Dynamic and Management Improvement Indicators

Performance Criteria	Unit of Measurement	Annual Target	2 nd Quarter Target	2 nd Quarter Achievement	Cumulative Achievement
Dynamic Effects					
Submission of 2019 Budgeted Staff Training Programme	Month	January	N/A	N/A	Not yet submitted
Percentage Implementation of 2019 Budgeted Training Programme	%	100	25	30	50
Submission of Draft Strategic Investment Plan (2020-2024)	Month	October	N/A	N/A	N/A
Submission of 2019 Maintenance Programme for Assets	Month	January	N/A	May	May
Percentage Implementation of 2019 Maintenance Programme for Assets	%	100	25	20	70
Submission of 2019 Safety Plan	Month	January	N/A	May	May
Percentage Implementation of 2019 Safety Plan	%	100	25	20	70
Submission of 2019 Water Safety Plan	Month	January	N/A	N/A	Not yet submitted

Performance Criteria	Unit of Measurement	Annual Target	2 nd Quarter Target	2 nd Quarter Achievement	Cumulative Achievement
Implementation of 2019 Water Safety Plan	%	100	25		Information not available
Management Improvement/ Projects					
Submission of Quarterly Reports	Weeks after Quarter	6	6	12	Reports submitted 8 and 12 weeks after end of 1 st and 2 nd Quarters respectively
Conformance to SEC reporting format	No. of Items	6	6	To be determined by SEC	To be determined by SEC
Submission of 2018 Audited Financial Statements	Month	April	April	Not yet submitted	Not yet submitted
Submission of 2020 Draft Performance Contract	Month	October	N/A	N/A	N/A
Submission of 2020 Draft Budget	Month	August	N/A	N/A	N/A
Submission of copies of Invitation Letters to Board meetings	Weeks after meeting	1	26 th April (Board meeting held on 18 th April)	15 th May	Submitted on 15 th May for two meetings (1 st meeting held on 12 th February and 2 nd meeting held on 18 th April)
Submission of copies of Board attendance List to meetings	Weeks after meeting	1	26 th April (Board meeting held on 18 th April)	15 th May	Submitted on 15 th May for two meetings (1 st meeting held on 12 th February and 2 nd meeting held on 18 th April)
Submission of 2018 Board Evaluation report	Month	January	N/A	N/A	Not yet submitted
Submission of 2020 Procurement Plan	Month	November	N/A	N/A	N/A

2.1.4 Technical and Operational Indicators

In the quarter under review, **803,821.28** cubic meters of water was produced against the target of **2,390,563** cubic meters. The *average water consumptions* stood at 20.59 liters against 40 liters whilst *households connected to water meters* exceeded its target of 15 percent to 66.61 percent. Similarly, the number of *new piped systems under CWSA management* exceeded its target by two (2). Details of the technical and operational indicators for the quarter is highlighted in Table 1.4 below:

Table 1.4 Technical and Operational Indicators

PERFORMANCE INDICATOR	UNIT OF MEASUREMENT	ANNUAL TARGET	QUARTER 2 TARGET	QUARTER 2 ACHIEVEMENTS
Administrative Cost/Total Revenue from Sale of Water	%	35.23	35.23	42.48*
WSMS Salary/Total Revenue from Sale of Water	%	59.66	59.66	48.32*
No. of new Pipe systems under CWSA management	No.	30	8	10
Non-Revenue Water	%	35	35	24.3
Total Water Production	Cubic Meters	9,562,252	2,390,563	803,821.28
Payment Rate for Private Subscribers	%	85	85	46.01
Average Water Consumption	Liters	40	40	20.59
Average Water Tariff	GHC	4.9	4.9	5.17
Household connected to water meters	%	60	15	66.61
Recurrent Expenditure/Total revenue from Sale of Water	%	94.89	94.89	90.80*
Average Vendors commission / Total Revenue	%	20	20	16.38

** Achievements on *administrative cost/total revenue from sale of water, WSMS salary/total revenue from Sale of water and recurrent expenditure/total revenue from sale of water* are for quarter one and two.

3.0 HUMAN RESOURCES AND GENERAL ADMINISTRATION

3.1 MANAGEMENT

Management of CWSA, both at the national and regional levels, continued to actively interact with staff on issues such as technical, planning and investments, extension services, Management Information System (MIS), finance and administrative. This culminated in effective planning and delivery of WASH services to rural communities and small towns across the regions. In that connection, management held regular staff and stakeholders' meetings to discuss progress of ongoing projects and the rural water sub-sector reform programme. Also, management with the support of staff monitored and supervised the activities of contractors and consultants working on various WASH projects as well as the operations of all the CWSA-managed piped water systems across the country.

During the quarter, management of the Agency, led by the Chief Executive, signed performance contracts for the year 2019 with all the regional offices. The signing took place at the CWSA Head Office Conference Room on 8th May 2019.

The Board of Directors of the Agency also met during the quarter (on 18th April 2019) to provide policy directions to deal with the challenges of the rural water sub-sector reforms and WASH services delivery to rural communities and small towns in general.

3.2 STAFFING

CWSA currently has a total of one thousand and fifty-two (1,052) staff which comprise forty (40) Head Office staff, one hundred and sixty- nine (169) Regional staff, five hundred and five (505) Water System Management staff and, three hundred and thirty-eight (338) Auxiliary staff with staff deficit of twenty-seven (27) at the national and regional levels.

During the period, the Chief Hydrogeologist for Central Region, Mr. Gustav Merrit Osiakwan was transferred to the Head Office. Also, Mr. Mustapha Mahama and Miss. Akosua Owusu Efaa were recruited as Executive Assistant and Water and Sanitation Engineer respectively. Table 4 below shows the details of the staffing situation at the head office and regional offices of the Agency as at end of June 2019.

Table 1.5: Staff Strength and Vacancies as at end of Second Quarter, 2019

Region Staff	AR	BAR	CR	ER	GAR	NR	UER	UWR	VR	WR	HQ	Total
Expected	21	18	18	20	19	22	18	16	21	19	44	236
Available	19	14	19	17	14	18	17	17	18	16	40	209
Vacancies	2	4	-1	3	5	4	1	-1	3	3	4	27
WSMS Staff	56	40	72	46	44	46	41	53	63	41	3	550
Auxiliary Staff	47	31	47	29	36	25	25	51	24	23	0	338

3.3 TRAINING AND DEVELOPMENT

A two-day training program was organized to improve WSMS and regional staff capacity in the management of the piped water systems in each of five (5) regions. This include Volta, Central, Western, Eastern and Greater Accra Regions respectively.

Also, a three-day (10th-13th June 2019) training took place at NODA Hotel, Fumesua in Ashanti Region on the Installation and Operation of the Billing Software. The purpose of the training was to provide the necessary technical support to regional ITS and the water systems staff to install and operate the billing software. Participants included the Director of Planning and Investments, IT coordinator, all IT Specialists at the Head Office), as well as IT Specialist for Upper West and Northern Regions.

The Information Technology Services Coordinator, Senior Planning and Investments Analyst, Planning and Investments Analyst and all Information Technology Specialist participated in a four-day (6th-9th May 2019) training workshop on map production using Geographic Information System (GIS) at the University of Ghana- CERSGIS. The purpose was to train all IT specialists and some selected staff in the production of maps using GIS and spatial data on water facilities. Some selected staff embarked on a four-day (28th-31stMay 2019) site visit to projects executed by BIGEN AFRICA (PTY) LIMITED in South Africa. Participants were the Chief Planning and Investments Analyst, Director of Technical Services, Extension Services Coordinator, Volta Regional Director and Chief Water and Sanitation Engineer.

4.0 MANAGEMENT OF PIPED WATER SYSTEMS AND STATUS OF ON-GOING PROJECTS

The transformation from facilitating the delivery of rural water and sanitation services to the management of small towns piped water systems progressed during the quarter. The following are details of the progress made by the various regions.

4.1 ASHANTI REGION

The Region during the quarter undertook repairs and maintenance of water systems, rehabilitation of water systems, water quality testing, stakeholder engagements, training and human resource

capacity building as part of the reform activities in the region. Details of activities carried out during the quarter under review are presented below.

4.1.1 Updates on Piped Water Systems Managed by the Region

The region currently manages fifteen (15) piped water systems. These include; Akrokerri Water System in Adansi North District, Juaben Water System in Juaben Municipal, Manso Nkwanta Water System in Amansie West District, Onwe & Kwaso Water Systems both in Ejisu Municipal, Atwedie, Bompata, Juaso & Dampong Water Systems all in Asante Akim South Districts, Adugyama, Sabronum & Mankranso Water Systems in Ahafo Ano South Districts, Abodom Water System in Bekwai Municipal, Ejura & Sekyedumase Water Systems both in Ejura - Sekyedumase Municipal.

5.1.2 Baseline Data (Survey)

The region was supposed to gather baseline data on all these water systems to identify their technical and financial state. However, the region conducted baseline data on only two (2) water systems in Ejura and Sekyedumase. The baseline data gathering, and technical assessment of these water systems was carried out at the invitation of the Municipal Chief Executive (MCE) and draft reports are yet to be submitted to the Regional Director for review.

5.1.3 Performance Contract

The region signed performance contracts with thirteen (13) water systems during the quarter. Signed copies are yet to be submitted to the Head Office.

5.1.4 Repairs and Maintenance of Piped Water Systems

Repairs and maintenance were done on thirteen (13) water systems in seven (7) districts. This included repair of leakages detected at High Level Tanks, washing of tanks and disinfection of boreholes, repairs of standpipes, installation of pump motor, accessories and control panels, replacement of bulk meters for production and distribution, replacement of non-return valves as well as replacement of broken-down transmission and distribution mains due to ongoing road construction.

5.1.5 Water Quality/Safety Issues

Water quality analysis was conducted in thirteen (13) piped water systems in 6 (six) districts however, the region is yet to receive the report. The water systems included Akrokerry, Juaben, Manso Nkwanta, Onwe, Kwaso, Atwedie, Bompata, Dampong, Adugyama, Sabronum, Mankranso, Abodom and Juaso.

5.1.6 Stakeholders Engagement

The region engaged stakeholders at the district and community levels on the need for CWSA to manage the piped water systems. Negotiations for rationalization of water tariff and vendor commission are currently ongoing in ten (10) water systems. Though the region encountered resistance from some Chiefs regarding CWSA's management of some water systems, efforts are still underway to get cooperation from the chiefs and community members. This will positively affect payment of water bills thereby enabling the region to meet its revenue targets. Monitoring of all CWSA-managed piped water systems was done and challenges noted.

5.1.7 Status of Ongoing Project in the Ashanti Region

Rehabilitation of Seniagya Water System was supposed to take place during the second quarter. However, no funds were received for this project.

5.2 AHAFO, BONO AND BONO EAST REGIONS

The Bono Regional Office had additional responsibility of facilitating the ongoing WASH activities in the two newly created regions; Bono East and Ahafo Regions. The region continued the implementation of the Additional Financing of the Sustainable Rural Water and Sanitation Project (AF-SRWSP) during the quarter. The region also participated in the management of piped water systems while carrying out rehabilitation works on these water systems. Details of the activities are as follows.

5.2.1 Updates on Piped Water Systems Managed by the Region

The region participated in the management of the following water systems; Akuma-Brahoho in Nkoranza South Municipal, Krobo in Techiman North District, New Longoro in Kintampo North Municipal, Wenchi in Wenchi Municipal, Kwame Danso in Sene West District and Nkrankwanta

in Dormaa West District. The Goaso Water System was handed over to CWSA by the Asunafo North Municipal Assembly in May 2019. A total of **GHC30,146.00** debt inherited from the Goaso piped water system which comprised of electricity bills and borehole mechanization was paid. The Wenchi, Goaso and Kwame Danso Piped Water Systems were identified to have inadequate water supply to meet the demand of the communities. Initial assessments and terrain evaluation for drilling of two (2) new boreholes each for Goaso and Kwame Danso Piped Water Systems to augment water supply was carried out. Procurement for siting and borehole drilling is being negotiated with CWSA Head Office.

In Wenchi, there are eight (8) boreholes out of which only two (2) are functional resulting in water rationing in sections of the town. To improve the situation, price quotations were received for supply and installation of two (2) pump motors.

5.2.2 Baseline Data Collection (Survey)

Baseline data collection in Asiri, Jankufa, Brosankro, Dotobaa and Prang under the AF-SRWSP is ongoing. The WSMS are engaged in the compilation of potential applicants for household connections. Also, baseline data collection on Goaso Piped Water System commenced during the quarter.

5.2.3 Performance Contract

The performance contract between the Regional Office and Akuma-Brahoho, Krobo, New Longoro, Nkrankwanta, Kwame Danso and Goaso Water Systems as well as Asiri, Jankufa, Brosankro, Dotobaa and Prang Water Systems which are under construction were signed in June 2019.

5.2.4 Repairs and Maintenance of Piped Water Systems

Repair works were carried on five (5) control panels in Goaso, Akuma-Brahoho and Wenchi Water Systems by Pump Tech Ltd. Also, repair works were carried out to resolve leakages on transmission lines for Krobo Water System.

5.2.5 Rehabilitation of Mim Piped Water System

The rehabilitation works on Mim Water System is still ongoing. Installation of five (5) pumps by Jwal Group Ghana Limited commenced in June 2019. Even though rehabilitation work was expected to be completed in April 2019 for the water system to commence operation, works are still behind schedule.

5.2.6 Water Quality/Safety Issues

As part of 2019 Water Safety Plan implementation, water quality assessment, tank cleaning, disinfection, and residual chlorine monitoring were carried out in order to safeguard treated water from source to the point of use. Chlorine test kits were purchased for the water systems to monitor the residual chlorine in the treated water and this greatly reduced customer complaints that were previously encountered regarding taste and odour. However, Wenchi, Mim and Goaso Piped Water Systems also require the installation of Sanikit Disinfection Units in order to ensure efficient disinfection.

Training on disinfection and residual chlorine testing was held in May 2019 for the technical staff of Goaso Water System. The quick repairs of pipe bursts and broken system components, especially at Wenchi, Krobo and Goaso Piped Water Systems also reduced customer complaints, non-revenue water and the possible contamination of the treated waters. The quarter under review witnessed improvement with respect to coliforms contamination.

5.2.7 Stakeholders Engagement

Stakeholders' consultations continued in the region within the quarter. The region engaged in a meeting with the Sene East District Assembly, opinion leaders and WSMTs. Discussions were mainly on CWSA's intention to manage Kajeji and Bassa Piped Water Systems. Also, there are indications of CWSA's involvement in the management of Atebubu, Amantin, Yeji and Parambo-Sewaba Piped Water Systems since these water systems are currently facing serious technical and managerial challenges. Discussions are ongoing with CWSA Head Office on the way forward for these Piped water systems.

5.2.8 Status of Ongoing Projects in Brong Ahafo Region

The Regional Office facilitated the implementation of the Additional Financing – Sustainable Rural Water and Sanitation Project. Under the project, construction of five (5) piped water systems is ongoing in Asiri and Jankufa in the Jaman North Districts, Prang in the Pru West District, Dotobaa in the Nkoranza Municipal and Brosankro in the Tano South Municipality. Completion rates of the various projects are estimated as follows: Generally, civil works are behind schedule and was 78.96% complete as at end of June 2019 – that is, Asiri (80.54%), Jankufa (80.80%), Prang (81.29%), Dotobaa (78.03%) and Brosankro (74.15%); the progress of electromechanical works was estimated at 90.33% complete which is within schedule. Variation orders have been issued on the civil works contracts hence the initial completion period of 15th July will be affected. Under the CLTS activities which is geared towards achieving Open Defecation Free (ODF) communities, an additional seventeen (17) communities have been triggered resulting to a total of 129 communities representing 100% achievement. A total of 604 Digni Loo household latrines were completed resulting in 2,748 household latrines completed which represents 82% achievement while school teacher latrine construction commenced in May 2019. A total of forty-six (46) ODF communities was achieved. Excavation of pits also began in the thirty-six (36) schools in thirteen (13) districts. See details of status of the project in Table 5.1 below;

The World Bank Mission Team also visited the region in May 2019 to conduct an implementation review and support mission under the project. The Mission Team during the 3-day working visit held meetings with key stakeholders including RCC, CWSA, Consultants, Contractors and community members. The team also held a consultative meeting to finalize the Aide Memoire.

Table 5.1: Status of On-going Projects in Bono, Ahafo and Bono East Regions

Project Name(s)/ Funding Source/ Duration	Amount received or transferred through the region to date	Overall Project Target for the Region	Cumulative Achievement (Since Project Inception to end of quarter)	2019 2 nd Quarter Target	2019 2 nd Quarter Achievement	Remarks/Challenges
<p>Project Name: Additional Financing-Sustainable Rural Water and Sanitation Project</p> <p>Funded By: International development Association of the World Bank (IDA)</p> <p>Duration: 2018-2019</p>	GHC1,422,082.37	<p>WATER SUPPLY 5no. Small Town Water Systems constructed</p>	<p>78.96% Civil Works completed 90.33% Electromechanical works completed</p>	-	-	<p>Works behind schedule</p> <p>Works within Schedule</p>
		<p>SANITATION 129 Communities triggered for ODF</p>	<p>129 Communities triggered for ODF</p>	17	17	100% Achieved
		<p>3,350 Household Digni Loo latrines constructed</p>	<p>2,748 latrines constructed</p>	1,728	604	82% Achieved cumulatively (the challenges were identified and are being addressed appropriately)
		<p>94 ODF Communities Declared</p>	<p>80 ODF Communities declared</p>	44	46	85% Achieved Cumulatively

5.3 CENTRAL REGION

The region during the second quarter facilitated and monitored software and hardware activities for various projects. The region carried out repairs and maintenance on some water systems and engaged stakeholders on the need to bring more water systems under CWSA's management in order to improve water service delivery. Details of activities carried out in the region within the quarter are presented as follows.

5.3.1 Updates on Piped Water Systems Managed by the Region

During the quarter under review, the region brought six (6) new piped water systems under its management. These include; Assin Wawase in Assin Fosu Municipality, Breman Bedum in Asikuma Odoben Brakwa District, Buabin and Akropong in Upper Denkyira East Municipality, Dansame in Assin North District, and Ndansimaim in Mfantseman Municipality. This brings the

number of water systems under CWSA's management in the region to twenty-four (24), clustered under eighteen (18) management units.

5.3.2 Baseline Data Collection (Survey)

Baseline data was collected on some piped water systems during the quarter. These included; Assin Akropong and Wawase Piped Water Systems in the Assin North Municipality; Buabin and Kyekyewere Piped Water Systems in the Upper Denkyira East Municipality; and Breman Bedum Piped Water System in Asikuma Odoben Brakwa.

5.3.3 Performance Contract

Performance contracts for the Piped water systems are yet to be completed for signing.

5.3.4 Repairs and Maintenance of Water Systems

During the quarter, various repair and maintenance works were carried out for all water systems. These included pump motor replacement and welding works at Effiefiso/Akwaboso/Subin Water System; replacement of 1No. 4.0KW Grandfos motor in A beadze Dominase Piped Water System; and repair work on control panels of all the water systems.

5.3.5 Rehabilitation of Piped Water Systems

Budgets for rehabilitation works on the water systems to expand and bring them to optimal operation have been submitted to the Head Office. The Region is yet to receive approval for implementation to commence.

5.3.6 Water Quality/Safety Issues

Water quality issues such as iron, salt and manganese pose a serious threat to the viability of some piped water systems in the region. For instance, the water treatment plant for Effiefiso/Akwaboso/Subin piped water system is broken-down resulting in poor quality of water from the water system.

5.3.7 Stakeholders Engagement

Stakeholders engagements with chiefs, elders and community members were carried out in some selected MMDAs with the objective of bringing more water systems under the management of CWSA.

5.3.8 Status of Ongoing Projects in Central Region

The following are projects currently under implementation in the region.

5.3.8.1 AF-SRWSP

Under this project, implementation activities of all the thirteen (13) contractors contracted to construct the small-town pipe schemes are progressing steadily. As at the end of the quarter, the overall work done was 64.03% out of which 47.45% has been invoiced. Below are estimated completion rates of the various projects.

Table 5.2: Summary of Works Completed as at June 31, 2019

Lot	District	Name of Contractor	% of Works Invoiced	% Progress	
				Achieved	Planned
AE1	Ajumako Enyan Essiam	Kaddacom Ltd	84.00	90.00	60.00
AE2	Ajumako Enyan Essiam	Betterworld Eng. Ltd	46.80	52.00	60.00
AE3	Ajumako Enyan Essiam	China Shanxi Sijian Group Ltd	32.00	58.60	60.00
AE4	Ajumako Enyan Essiam	Western Water Works	62.9	84.60	60.00
AE5	Ajumako Enyan Essiam	Vicco Ventures Ltd	43.90	63.70	60.00
AE6	Ajumako Enyan Essiam	Donajos Company Ltd	23.00	45.00	60.00
ASS1	Assin South / Abura Asebu Kwamankese	Hydronomics Ltd	54.30	60.80	60.00
MF1	Mfantsiman	2K Construction Ltd	32.50	47.70	60.00
GW1	Gomoa West	Deccos Investment Ltd	28.30	35.90	60.00
AS1	Awutu Senya/Awutu Senya East	Blessedfield Ltd	77.10	89.40	60.00
AS2	Awutu Senya/Awutu Senya East	2K Construction Ltd	73.00	74.80	60.00
AS3	Awutu Senya/Awutu Senya East	Jonako Construction Company Limited	38.00	63.00	60.00
AOB	Asikuma Odoben Brakwa	Zigma Engineering	21.10	66.90	60.00
	OVERAL WORKDONE		47.45	64.03	60.00

As part of enforcing implementation of Environmental and Social Safeguards activities, the following were carried out during the quarter:

- ✚ Monitoring compliance and adherence to health and safety plan
- ✚ Facilitating the redress of grievances among Project Affected Persons
- ✚ Support to District Safeguards Teams to enable them to conduct their monitoring activities
- ✚ Preparation and submission of Environmental and Social Safeguards report

The region also undertook monitoring and field assistance exercise to assess implementation status of the sanitation component of the AF-SRWSP. During this exercise, some community members were assisted to complete their superstructures. Table 5.3 provides the breakdown of achievements as at the end of the quarter.

Table 5.3: Sanitation Status of AF-SRWSP

No. of Households	No. of Improved Household Latrines Present	No. of Hand washing Facilities Present	Latrines Required to Attain ODF	No. of Digni-Loos received	No. of Digni-Loos left to be supplied to community by CWSA	No. of Household READY (Pits dugged, superstructure material available)	Total number of Digni-Loo Latrines constructed	No of Households with Hand washing facilities
2510	474	257	2,158	866	580	562	624	135

Again, the region took delivery of teachers Digni-Loos for schools in the nine (9) beneficiary districts. Subsequently, Latrine Artisans from all beneficiary districts were trained on the installation of the Digni-loos and how to observe environmental and social safeguards during construction. MOUs were also signed with twenty (20) schools and twenty (20) Latrine Artisans/Contractors for the commencement of construction. The Digni-loos have since been delivered to the schools.

5.3.8.2 Rotary International/ USAID WASH PROJECT

During the quarter, three (3) water and sanitation management teams (WSMTs) were formed and trained. Also, five (5) School Health Committees (SHC) were trained under this project.

5.3.8.3 PLAN GHANA RWASH/ICWASH PROJECT

The regional team monitored the successful drilling of twelve (12) boreholes awaiting handpumps installation.

5.3.8.4 UNICEF/GoG WASH PROJECT

Under this project, the region undertook monitoring visits to Katakyaase and Ankukrom in the AAK and AEE Districts respectively, to review and update their water and sanitation plans.

Table 5.4: Status of On-going Projects in Central Region

Project Name(s)/ Funding Source/ Duration	Amount received or transferred through the region to date (GHC)	Overall Project Target for the Region	Cumulative Achievement (Since Project Inception to end of quarter)	2019-2 nd Quarter Target	2019-2 nd Quarter Achievement	Remarks/ Challenges
IDA -AF-SRWSP	1,171,244.06	<ul style="list-style-type: none"> • 9No. Small Towns Pipe Water System connected to GWCL (for 83 communities) • 3,330No. Household latrines constructed (Digni-Loo) • 90No. ODF communities 	<ul style="list-style-type: none"> • All water systems under construction • 624No. Household latrines constructed (Digni-Loo) • 10No. ODF Communities 	<ul style="list-style-type: none"> • 53No. communities connected • 1,000No. Household latrines constructed (Digni-Loo) • 10No. ODF Communities 	<ul style="list-style-type: none"> • 53No. communities connected • 624No. Household latrines constructed (Digni-Loo) • 10No. ODF Communities 	<p>All the STPSs are under construction and in various levels of completion 625No. Household (pits dug and superstructure material available.</p> <p>135 households have handwashing facilities</p>
Rotary/USAID WASH Project	61,300.20	<ul style="list-style-type: none"> • 8No. BHs Construction • 13No. KVIPs 	<ul style="list-style-type: none"> • 8No. successful BHs with handpump installed • 13No. KVIPs Latrines constructed 	-	<ul style="list-style-type: none"> • 2No. WSMTs formed and trained. • 5No. School Health committees formed and trained 	-
UNICEF/GOG WASH Project	255,140.41	-	-	-	Monitored the implementation of Water Safety Plans in Ankukrom & Katakyaase	-
PLAN GHANA – RWASH/ICWASH Project	17,339.75	<ul style="list-style-type: none"> • 17No. BHs Construction 	<ul style="list-style-type: none"> • 12No. BHs drilled 	<ul style="list-style-type: none"> • 6No. BHs drilled 	12No. BHs drilled	-

5.4 EASTERN REGION

During the quarter, the region rehabilitated the Aqualite Treatment Plants for Bosuso and Akooko, expanded the Asesewa Piped Water System to four (4) sections of the town, held series of stakeholder engagements with District and Municipal Assemblies to manage of some selected piped water systems amongst other activities. Details of these are presented below:

5.4.1 Updates on Piped Water Systems Managed by the Region

During the second quarter, the region added eight (8) piped water systems to the number already under its management. These included the Akooko and Asiakwa piped Water Systems both in Abuakwa south, Akroso Piped Water System in Akroso Asene Manso, Asesewa Piped Water System in Upper Manya Krobo, Akwadum/Nankese Piped Water System in New Juabeng North/Suhum, Adasawase and Akim Sekyere Piped Water Systems both in Atiwa East as well as Bosuso Piped Water System in Fanteakwa South.

The region is also evaluating bids for the drilling of seven (7) boreholes to augment the production capacity of small-town piped water systems which have single water source.

Interviews were conducted for support staff in the following communities; Donkorkrom/Mem Chemfre, Maamekrobo, Pramkese, Abaam, Otumi, Dwenase/Apinaman, Takrowase, Kusi, Akim Wenchi, Boadua, Mepom, Asuokaw, and Aperade.

5.4.2 Performance Contract

The region signed performance contracts with the piped water systems staffs during the quarter.

5.4.3 Repairs and Maintenance of Piped Water Systems

During the quarter, the region constructed four (4) standpipes, rewired and serviced control panel of one (1) pump house in Asesewa. The region also supplied 107 quantities of 2” UPVC pipes and related fittings to extend distribution pipelines to new areas in Akooko. Control panel for pump house number 1 in Akim Sekyere was serviced and the water level relay replaced as well.

5.4.4 Rehabilitation of Piped Water Systems

Rehabilitation of Aqualite Treatment Plant at Akooko, Bosuso and Asiakwa has been completed. However, after completion of work, a contractor (General Construction) working on the Osiem to Begoro road caused extensive damage to a large section of both the transmission and distribution pipelines of the Bosuso Water System. All efforts have been made to get the contractor repair the damaged pipelines but to no avail. The Regional Office has again made effort to get the clients, Ghana Highway Authority/COCOBOD to assist with the repairs but they were also uncooperative. The Region is therefore requesting Head Office to support the Regional Office to carry out the repair work to make the water system operational.

5.4.5 Stakeholder Engagements

The region engaged three (3) communities – Akim Sekyere, Adeiso and New Abirem at the Regional Coordinating Council to discuss the need to allow CWSA to manage the piped water systems in these communities. The Kwaebibirem Municipal Assembly handed over three (3) water systems (Otumi, Abaam and Pramkese) to CWSA to manage. Also, the Regional Minister and CWSA met with the chiefs and people of Akim Sekyere to address issues on agitation from the community on tariff rationalization. Also, final engagement with the chief and elders of Aperade in the Achiase District was done. The regional team engaged Ghana Red Cross on the stalled Ghana-WASH 18 Borehole Project. A meeting with Gyasehene and elders of Amanase was held on the piloting of solar pump systems in the community.

5.4.6 Status of Ongoing Projects in Eastern Region

This sub-section entails a description of the status of all ongoing WASH projects in the region.

5.4.6.1 PLAN GHANA INTERNATIONAL WASH PROJECTS

PLAN Ghana with funding from its partners in Germany intends to drill twelve (12) boreholes in some selected communities in the Akuapem North Municipal and Okere District under Plan Ghana RWASH Project. Four (4) of these boreholes will undergo limited mechanization. Also, three (3) boreholes were drilled in the quarter under the Plan Ghana ICWASH Project which seeks to drill seven (7) boreholes installed with handpumps.

5.4.6.2 RI/USAID

The RI/USAID Water collaboration project seeks to drill thirteen (13) boreholes in the Ayensuano and Kwaebibirem Districts, install eleven (11) with hand pumps and mechanize two (2). So far, eleven (11) boreholes have been installed with hand pumps, one (1) mechanized and one (1) awaiting small town mechanization.

5.4.6.3 KWMA BOREHOLE MECHANIZATION PROJECT

The Kwahu West Municipal Assembly (KWMA) intends to mechanize eleven (11) exiting boreholes and has requested CWSA-ER to act as facilitator of the project. So far, reconnaissance survey has been undertaken in all the eleven (11) communities and the report submitted to the Municipal Assembly.

5.4.7.4 DIRECT AID-KUWAIT

Direct Aid headquartered in Kuwait intends to drill a total of fourteen (14) boreholes in some selected districts. As part of preparatory activities towards commencement of the project, a team from CWSA-ER and representative from Direct Aid visited four (4) communities in the Asuogyaman District during the quarter.

5.4.6.5 CHOBI PROJECT (KOREA)

Under this Korean founded project, two (2) boreholes are to be drilled and mechanized in Ahodwo and Ahwerease. In addition, water treatment plants and hydrants will be provided. The current status of these projects is summarized in table 5.5 below.

Table 5.5: Status of On-going Projects in Eastern Region

Project Name(s)/ Funding Source/ Duration	Amount received or transferred through the region to date	Overall Project Target for the Region	Cumulative Achievement (Since Project Inception to end of quarter)	2019 2nd Quarter Target	2019 2nd Quarter Achievement	Remarks/ Challenges
RI/USAID H2O Collaboration	-	Drilling and Construction of 13 BHs, 2 to be mechanized	11 BHs installed with handpumps 4 No. IRP constructed and 1 BH mechanized to WC facility	To mechanize 1 No. BH as a small- town water system	Construction of 4No. IRP and installation of 11 handpumps 1 No. BH mechanized to WC facility	High levels of iron and manganese for which 4 IRPs were constructed at extra cost to the project
PLAN INT. GH (EPU) RWASH	-	Site and drill 12 BHs and mechanized 4 of them	Sited 12 communities and drilled in all 12 communities	To undertake hydro fracture of 3 marginal BHs and conduct pump test	Conduct pump test for all 8 No. successful BHs Take 8 water sample to the Laboratory for Water quality analysis	Difficult Hydro geological terrain leading to 5No. marginal wells
PLAN INT IC WASH	-	Supervision of drilling of 7No. BHs with handpumps	All 7No. wells have been drilled	All 7No. BHs have been drilled	All the 7No. BHs were drilled in the quarter.	High number of dry and marginal wells
KWEHU WEST MA	-	Mechanization of 11No. BHs	Reconnaissance survey conducted in 11 communities	To drill 2 new BHs and mechanized 11BHs	Reconnaissance survey	Not yet
CHOBI PROJECT (KOREA)	-	Drilling and construction of 1 BH each at Ahwerease and Ahodwo	A total of 6 BHs drilled and Hydro fractured to obtain a high yielding BH at Ahwerease and Ahodwo	To drill and mechanize 1 BH each at Ahwerease and Ahodwo	The first 4 No. BHs were pump tested and a decision taken to drill an additional BHs each at Ahwerease and Ahodwo	High cost overrun due to low yields obtain from drilling as a result of Hydrofracturing all the BHs
KUWAIT ASSISTED BH PROJECT	-	Construction of 14 BHs with handpumps in 4 communities in Asuogyeman District	Undertaken reconnaissance survey in 4 communities	To drill 4 BHs with handpumps	-	-
MAJI PROJECT	-	To install a total of 2 No. solar powered mechanized water vending units at Amanase	Undertaken reconnaissance survey at Amanase	2 No. solar powered mechanized water vending units at Amanase	Undertaken reconnaissance survey at Amanase	Development Partners trying to sideline CWSA

5.5 GREATER ACCRA REGION

The region has three (3) piped water systems under its management which consist of -Districts Water Supply Scheme (3-DWSS), Kweiman-Danfa Piped Water Supply Scheme (KDWSS) and Osudoku Piped Water Supply Scheme (OWSS). During the quarter, the CWSA Board of Directors visited some selected water schemes to familiarize themselves with the daily operations at the system level and the challenges encountered. Also, the 2019 Sanitation Action Plan (SAP) drawn in the KWSS which seek to support households acquire waste bins has still not materialized which increased indiscriminate dumping of refuse in the area. The region met various stakeholders during the quarter which included the RI/USAID WASH Project team, Rotary International/USAID Partnership Program Support Team from USA, chiefs and engagement of the Nii Adjei Wulu of Danfa and Nii Kwetia families in Kweiman to discuss modalities of acquisition of parcels of land for the Kweiman-Danfa water expansion project. Also, the three (3) piped water systems under the Region's management have been sampled for Water Quality Analysis at GWCL and is awaiting Water Quality test results whiles new chlorinators have been installed on all these water schemes.

5.5.1 Updates on Water Systems Managed by the Region

The Greater Accra Region is currently participating in the management of three (3) piped water schemes namely; 3-Districts Piped Water Supply Scheme (3-DWSS), Kweiman-Danfa Piped Water Supply Scheme (KDWSS) and Osudoku Piped Water Supply Scheme (OWSS). The three Piped water supply schemes managed by the region serves over 160 communities with a population of over 160,000. The Osudoku Piped Water Supply Scheme (OWSS) and 3-Districts Piped Water Supply Scheme (3-DWSS) depend on surface water (Volta River) and the Kweiman-Danfa piped water supply scheme (KDWSS) currently depends on two boreholes. Expansion of Kweiman-Danfa Water Supply Scheme is underway as the contract has been awarded with commencement of work by the contractor. The following technical services was under taken during the quarter.

5.5.1.1 Technical

3-Districts Piped Water Supply Scheme

The region facilitated the replacement of three (3) submersible pumps at the in-take well and servicing of six (6) high lift pumps at the Aveyime treatment plant. Various materials were procured for the schemes for prompt response to pipe burst and scheduled maintenance works

while eighty-seven (87) defaced domestic meters were replaced. Evaluation report for the repairs and maintenance of five (5) high level tanks which were leaking was submitted to the head office.

Kweiman- Danfa Piped Water Supply Scheme

Within the quarter under review, the region installed a total of 305 domestic meters. This comprised of 230 for customers on flat rate and 75 for replacement of defaced/faulty meters. Materials were procured for the scheme for repair works.

Osudoku Water Piped Supply Scheme

An evaluation report was submitted to the Head Office for the supply and installation of three (3) surface pumps to replace malfunctioning pumps. The contract for the assignment has since been awarded and work is ongoing. Also, a total of 209 domestic meters have been installed under this scheme.

5.5.2 Baseline Data Collection (Survey)

The baseline data gathered on the three water schemes during the quarter showed that, 3DWSS and OWSS generates its water from surface water. However, three (3) submersible pumps of 3DWSS have been replaced whereas six (6) highlight pumps were serviced. Also, one (1) and five (5) surface pumps of 3DWSS and OWSS respectively are currently not functioning optimally. While 3DWSS has eight (8) high level and one (1) underground tanks for distribution with five (5) leaking high level steel tanks, OWSS has three (3) high level tanks for distribution. The baseline data obtained on KWSS indicate that, it has its water source from two (2) Borehole and with two (2) submersible pumps. This water scheme has one (1) high level tank for distribution.

5.5.3 Performance Contract

The Region signed the performance contract with all the three (3) water supply schemes on the 1st of July 2019. The targets are however effective from January 2019.

5.4.4 Repairs and Maintenance of Piped Water Systems

During the quarter under review, the region carried out major repairs on the three piped water schemes (3-DWSS, KDWSS and OWSS). The region cleaned rough and smooth chambers, repaired intake and booster pumps, repaired standpipes, excessive leakage of fire hydrant, leakages

on transmission and distribution lines, changed sluice valves, non-return valve, serviced submersible pumps, and replaced default' Bulk Meters.

5.5.5 Rehabilitation of Piped Water Systems

A meeting was held with the Consultant and Contractor working on the Kweiman-Danfa Water Supply Expansion Project (KDWSEP) to discuss preliminary activities that needed to be undertaken before entry into the beneficiary communities. Following the meeting, cadastral sketches of locations of the two (2) boreholes and the High-Level tank has been done to determine the exact location and sizes of the land to be acquired. Also, negotiations with the landowners have been carried out to ensure proper acquisition of land and possession of sites. Finally, the chiefs and people of the beneficiary communities were met for project disclosure and introduction of consultant and contractor. The forum was used to appreciate all families who have accepted to part with their lands for the project. Critical project information and expectation was explained into detail while emphasizing on the project cost, the expected project during which is 18 months, the inconveniences, safe guard issues and expansion of system by 100% compared to present supply.

5.5.6 Water Quality/Safety Issues

The three (3) schemes have new chlorinators installed and are all working optimally. The engineers at KDWSS and OWSS have been trained on how to prepare and handle concentrated calcium hypochlorite solution for their respective schemes and the dossers are programed to dose at 2mg/L as required by Ghana Standard Authority (GSA). Standardizing and monitoring of residual chloride are adequately implemented.

Water from the schemes under the management of CWSA-GAR have been sampled for 2nd Quarter Water Quality Analysis and awaiting Water Quality test results from GWCL. The raw water from 3-DWSS and OWSS was sampled to ascertain the true state of the raw water abstracted due to the activities of fish farmers and sand winners. Samples were collected in the morning; unpolluted river Volta was sampled one (1) meter deep in the middle of the river. Samples were taken down flow from fish farm and around the sand winners. samples were taken one (1) meter deep into the river and the result showed high levels of turbidity, total suspended solids, colour, iron and magnesium. Comparing the results from the activities to the unpolluted water sampled

upstream with parameters from GSA, the activities are having significant impact on our raw feed. A detailed report has been submitted to Head Office.

The region cleaned and disinfected the reservoir on the 14th June 2019 to improve the safety of water delivery. The pH of the composite raw water from the two pump houses for the scheme is now 6.5 compare to its average pH of 6.4 for the past 15 years. The newly drilled boreholes earmarked for the expansion also have a pH of 6.1 which is below the standard recommended range of pH approved by GSA. It is recommended that; an aerator be incorporated into the expansion project to introduce oxygen to disrupt the equilibrium between the carbonates and carbon dioxide thereby reducing the concentration of carbon dioxide to adjust the pH above 6.4. Again, the expansion design should be maintained and dose with soda ash (sodium bicarbonate) to adjust the pH to 7.

The region monitored the average residual chloride of 0.7mg/l during the latter part of the second quarter. The grater at the aeration tank needs to be replaced to enhance the precipitation of iron, Manganese and to increase amount of dissolved oxygen. The OWSS piped system was challenged with issues of complaint of Algae/Slimy water. However, investigation carried out indicated that, consumers storage containers were dirty with no covers while some people mix rain water and pipe water hence making the water slimy. Another challenge was pollution from sand winners which puts stress on the filtration medium and Pollution from Fish Farming which results in growth of algae's there by clogging the filtration media hence producing less water than expected.

5.5.7 Stakeholders Engagement

The Regional Office participated in Interim Management Committee (IMC) meeting on Abokobi-Oyarifa-Teiman (AOT) Water Supply Scheme on 26th April 2019. The meeting discussed the 2019 1st quarter technical and financial reports of the scheme and the pressure from chiefs and elders of the beneficiary communities to increase supply to meet the increasing water demand. Again, a meeting was held on the 29th April 2019 to brief the District Assembly on progress made on the engagement with the chiefs of Abokobi, Oyarifa, and Teiman.

The region engaged the Assembly members and chiefs of the Pantang Area Water Supply Scheme and plans are underway to add this system to the piped water systems under the region's

management. At the end of the meeting, there was an agreement to establish an Interim Management to manage the scheme for a period of 2 months by which CWSA would have engaged all stakeholders on the reform and deployed staff. Also, the Region visited the Abokobi-Oyarifa-Teiman water supply scheme with the consultant for him to carry out assessment and simulation of the scheme. It was found that, the chlorination unit of the scheme is broken down and the scheme does not have a water safety plan.

5.5.8 Training and Development

The regional staffs and WSMS participated in the following training programs during the quarter;

5.5.8.1 Capacity Building for Regional Staff

The region participated in a two-day training organized by the head Office for Regional staff from 16th-17th April 2019. The focus was to trained staffs on their various job descriptions. Also, the Regional Director and the Water and Sanitation Engineer participated in seminar on Grundfos Water Pumps at the La-Palm Beach Hotel during the quarter under review.

5.5.8.2 Capacity Building for WSMS

WSMS for the region participated in a three (3) day staff training organized by head office in which they were trained on their various job descriptions. Again, the Technician Engineer from 3DWSS participated in the seminar on Grundfos pumps at the La-Palm hotel during the quarter under review.

5.5.9 Status of On-Going Projects in Greater Accra Region

The sub-headings below give details of un-going projects in the region.

5.5.9.1 Rotary International/USAID WASH Project

Water

The project involves the construction of sixteen (16) boreholes fitted with hand pumps in ten (10) communities and additional borehole at Fante Mayera earmarked for Limited Mechanized System. The contractor successfully drilled seventeen (17) boreholes with eight (8) having marginal yields. The eight (8) have undergone Hydro fracturing to improve the yields. Water Quality Analyses carried out indicated some levels of Fe, Mn, in five (5) boreholes which required treatment plants

to be constructed. The five (5) treatment plant have been constructed. Pumps have been installed on all the boreholes, except for two (2) boreholes which are earmarked for mechanization at Fante Mayera.

Sanitation

CWSA is collaborating with RI-USAID to provide five (5) KVIPs and two (2) 3-Seater Water Closets to some selected institutions in the Greater Accra Region. The contract was terminated due to non-performance of the contractor who won the bid. (Messrs. Shakdeen Company Ltd). The contract was re-awarded to Messrs. Links Drilling & Construction Ltd. to rehabilitate four (4) KVIPs, two (2) 3-Seater Water Closet toilets and to construct one (1) new KVIP in the Ga South and Ga West Municipalities. The contractor has completed all works on the four (4) KVIPs, and two (2) WCs except for one (1) New KVIP to be constructed at Kotoku.

Water Safety

In order to confirm the water quality status on boreholes in Fante Mayera, Aduflo and Hobor Congo cost estimates for sampling and testing have been prepared and presented to RI/USAID WASH Project Coordinator for study and further directives.

Provision of Extension Services to 11 Communities

WSMT Training 2 was successfully conducted in Aduflo and Fante Mayera. Hygiene and sanitation Action Plans have been prepared for facilitation. Also, Facility Management Plans (FMP) has been prepared and endorsed for Aduflo community while a progress meeting of all stakeholders of the RI/USAID WASH Project was held to discuss progress activities and challenges of the project in the beneficiary regions.

Validation Workshop on Assessment of the Phase RI/USAID Project

The region was represented in a 1-day workshop organised by Agua Consult to disseminate and validate the findings and recommendations from the assessment of the Phase 1 of the RI/USAID WASH Project. The key point of the workshop was the need for Rotary International to have further discussions with CWSA on how best to operate and maintain facilities provided under the project to ensure sustainability.

Monitoring visit to project sites

The Rotary International/USAID Partnership Program Support Team from the USA visited the Ghana Project from 24th June to 4th July 2019 and project sites were visited on the 28th June 2019. The visit was to inspect the water and sanitation infrastructure under the project, interact with stakeholders and capture images of partnership and stories for publication.

5.5.9.2 UNICEF F4WASH 2.0

Sanitation

The region with support from UNICEF is to provide eighteen (18) Institutional toilets in some selected schools within LaDMA and LeKMA. The project involves the construction of ten (10) 6-Seater Pour Flush Squatting Toilets with Ancillary Facilities for the selected Basic Schools within the Ledzekuku-Krowor Municipal Assembly and the construction of eight (8) 10, 6, and 4-Seater Pour Flush Squatting Toilets with Ancillary Facilities for the selected Schools in La Dadekotopon Municipal Assembly. Two (2) contractors; Pekeir Ltd and El-Madina Co. Ltd, won the contracts for the construction of the toilet facilities in LeKMA and LaDMA respectively. Pekeir Ltd (LeDMA) has completed its work. A final joint inspection was conducted on the facilities and the team directed the contractor to make a few corrections before handing over the facilities. El-Madina Co. Ltd (LaDMA) on the other hand is expected to complete the works by the end of July 2019.

Water Safety

Work plan and budget to sample water for testing available to 99 schools in Greater Accra has been prepared and forwarded to UNICEF for study and approval.

Collaboration with Other Stakeholders

The Extension unit in collaboration with the United Way Non-Governmental Organisation carried out a hygiene and sanitation promotion in Darul Hidjra basic school to educate the students, teachers and parents on the consequences of open defecation, how to prevent encountering germs and how to wash hands properly. This program took place on the 24th June 2019.

Table 5.6 Status of On-going Projects in Greater Accra Region

Project Name(s)/ Funding Source/ Duration	Amount received or transferred through the region to date	Overall Project Target for the Region	Cumulative Achievement (Since Project Inception to end of quarter)	2019-2 nd Quarter Target	2019- 2 nd Quarter Achievement	Remarks/ Challenges
RI - USAID H ₂ O WASH Collaboration Project	45,717.00	Provision of extension services in 11 communities - Establishment of 11 WMSTs - Training of WSMTs in 3 phases - Opening of Bank account for each WSMT - Preparation and implementation of Hygiene and Sanitation action plan in 11 communities. - Formulation and endorsement of 11 facility management plan for each community - User education in all 11 communities -End of phase reports	- WMST training 1 conducted. - Bank accounts opened for 11 communities - 4 HSAPs prepared - WSMT training 1 report submitted - Communities Mobilization phase report submitted - FMP formulated in 2 communities	- WSMT training 2 in 11 communities - FMPs formulated for 11 -7 HSAPs	- 2 HSAP prepared WSMT training 2 in 2 communities - FMP formulate in 1 community	-
		Construction of 16no. Boreholes fitted with Hand Pumps	-16 No. Boreholes drilled -14No. Boreholes fitted with hand pump -5No. Iron and Manganese removal plants constructed	-	Awarded the contract and supervised the construction of 5No. Iron and Manganese removal plants constructed	Funds disbursed directly RI
UNICEF F4WASH Program 2.0	1,622,792.36	Construction of 18 No. Pour Flush Squatting Toilets in some selected schools within LaDMA and LeKMA	Construction of 18 No. Pour Flush Squatting Toilets	-	Liaised with the District to supervise the construction of 10No. pour flush squatting toilets and 8No. W/C	Construction of 18 No. Pour Flush Squatting Toilets in some selected schools within LaDMA and LeKMA

5.6 NORTHERN, NORTH EAST AND SAVANNA REGIONS

The Region is currently implementing AF-SRWSP activities in Walewale, Nalerigu, Gambaga and Yapei. As part of the reform activities, the Region carried out rehabilitation, repairs and maintenance, stakeholder engagements and capacity building of staff amongst others. Below are details of the activities.

5.6.1 Updates on Piped Water Systems Managed by the Region

The Region is currently managing seven (7) piped water systems, i.e. Bole Water System in Bole District, Bimbilla Piped Water System in Nanumba North Municipality, Wulensi Piped Water System in Nanumba South District, Tatale Piped Water System in Tatale-Sanguli District, Zabzugu Piped Water System in Zabzugu District, Daboya Piped Water System in North Gonja District and Fufulso Piped Water System in Central Gonja District. The Bunkprugu/Nankpanduri District Assembly requested CWSA-NR to redeploy staff to manage the Bunkprugu Water Supply System after the DA had a verbal agreement with the Bunkpurugu chief.

5.6.2 Performance Contract

The Region signed performance contracts with the various Piped Water System Staff to help realize the Regional Performance Contracts.

5.6.3 Repairs and Maintenance of Piped Water Systems

Repairs and maintenance works were done in Bole, Bimbilla, Wulensi and Zabzugu Piped Water Systems which ranged from fixing of burst distribution mains, faulty tap heads and changing of locks in the various valve chambers of standpipes. During the quarter, Pumptech Limited also worked on one borehole and the pump house of Zabzugu and Wulensi Piped Water Systems respectively.

5.6.4 Status of Ongoing Projects in Northern Region

There are two projects currently ongoing in the region. They include; the AF- SRWSP and the UNICEF Accelerated Grant project.

5.6.4.1 AF-SRWSP

This project consists of construction of one (1) Small Town Piped system, rehabilitation of six (6) Small Towns Water systems, and construction of one hundred and thirty-one (131) Digni-loo latrines for teachers and 3,350 household latrines to achieve one hundred (100) ODF communities. During the quarter, the Chief Executive visited the Region and inspected on-going activities of the project. Also, a mission comprising staff of the World Bank, Ministries of Sanitation & Water Resources and Finance, CWSA- Head Office and the National SHEP coordinator at GES paid a three (3) day working visit to the Region to ascertain the level of work done under all components of the project. Also, thirteen (13) contractors working on different components of the water supply systems in seven (7) communities and in six (6) Municipal/District Assemblies are currently on site and work is at various stages of completion.

Under the Sanitation component of the project, seventeen (17) communities have been declared open defecation free as at the end of the quarter under review. A total of 1,253 Digni-Loo request have been received from six (6) MMDAs and forwarded to CWSA-Head Office for supply to the communities. The Region continued with monitoring and supervision of latrine construction works in schools and health facilities. However, none of the outstanding thirty-five (35) latrines were completed during the quarter. Four (4) of the additional twenty (20) latrines contracted to best performing contractors with running contracts were completed and the remaining sixteen (16) are at various levels of completion and are expected to be completed by the end of July 2019.

5.6.4.2 UNICEF

The water subproject consists of drilling of ninety-four (94) boreholes fitted with hand-pumps and forty-six (46) pipe extensions to schools and health centers as well as consulting services for the supervision of the works. The Sanitation subproject consists of 340 latrines for schools and health centers.

Twenty-five (25) more boreholes are to be drilled to augment the fifty-four (54) successful boreholes that were realized during the first drilling campaign. Twenty-two (22) pipe extensions were completed with connections to the respective water supply systems. The remaining 24 pipe extensions are expected to be completed by the end of next quarter.

The progress of activities on on-going projects in the Region is indicated in the table below.

Table 5.7: Status of On-going Projects in Northern Region

Project Name(s)/ Funding Source/ Duration	Amount received or transferred through the region to date	Overall Project Target for the Region	Cumulative Achievement (Since Project Inception to end of quarter)	2019-2nd Quarter Target	2019-2nd Quarter Achievement	Remarks/ Challenges
AF-SRWSP <i>Water</i>	1,221,895.25	7 Small Town Water Systems	-	7	-	Works are on-going at various sites in 7 project communities
<i>Sanitation</i>	105,000.00	3,350 Household latrines & 100 ODF Communities	-	No target set	126	
<i>Environmental Safeguard</i>						
UNICEF -KVIP	4,575,086.91	340	281	55	4	
-Boreholes		94	54	20	0	
- Pipe Extensions		46	22	46	22	

5.7 UPPER EAST REGION

Activities undertaken by the Region during the quarter include baseline data collection, performance contract preparation, repair and management of water systems and water quality issues. The Region also continued the implementation of AF-SRWSP, UNICEF, ENHANCED WASH PROJECT and EPA Project activities. The following gives specifics about the activities.

5.7.1 Updates on Water Systems Managed by the Region

A total of seven (7) water systems are currently under the direct management of the region. These include; Sandem Water System in Builsa North District, Chiana and Paga Water Systems both in Kassena-Nankana West, Bongo Water System in Bongo District, Pusiga Water System in Pusiga District, Zebila and Binaba-Kusanaba Water Systems both in the Bawku West. The Regional Office has however taken the initiative to manage three other water systems, namely: Wiaga and Fumbisi Water Systems both in Builsa North and Tongo Water System in Talensi District.

5.7.2 Baseline Data Collection (Survey)

Baseline data for Piped water systems managed by the Region were updated to befit the current status and submitted to CWSA Head Office. GPS coordinates for pipeline extension were also collated and submitted to CWSA Head Office.

5.7.3 Performance Contract

Performance contracts with the Water System Management Staff could not be signed in the quarter under review as planned. The signing will take place in the next quarter.

5.7.4 Repairs and Maintenance of Water Systems

Repairs and maintenance work carried out on the water systems within the quarter included; redesign of pump control panel for the Zorkor Piped Water System, rectification of faulty pump control panels in Paga, Sandema, Chiana, Wiaga and Fumbisi and replacement of complete submersible pump for newly mechanized borehole (C10) in Sandema.

5.7.5 Rehabilitation of Piped Water Systems

The water systems in the region currently being managed by the CWSA Regional Office have not yet seen any rehabilitation. The Region awaits the nationwide rehabilitation spearheaded by the CWSA Head Office with assistance from UNICEF.

5.7.6 Water Quality/Safety Issues

As part of implementation of the 2019 Water Safety Action Plans, water quality analysis was carried out for seven water systems under CWSA management. The water systems included Pusiga, Zebilla, Binaba-Kusanaba, Bongo, Paga, Chiana and Sandema. The water samples were submitted to Ghana Water Quality Control Laboratory to establish the water quality at the various communities. The parameters that were analyzed include Turbidity, pH, Total Dissolved solids, Nitrite (NO_2^-), Conductivity, Iron, Fluoride Sulphate, Manganese, Chloride, Zinc, Ammonia (NH_3), Temperature, Calcium, Colour and total coliform. Water from reservoirs, private connections and household storage facilities were sampled for bacteriological analysis.

At Pusiga borehole one (1), the result showed unsatisfactory level of Total hardness of 604mg/l as compared with Ghana Standards Authority (GSA) value of 500mg/l. At Zebilla pump house A1, the result for Total hardness does not conform to GSA value of 500, which is unsatisfactory and

requires softening. However, the sample results of physio-chemical for the seven (7) water systems generally conform to World Health Organization (WHO) and GSA guidelines and were safe for drinking, except for Bongo pump house 2, which has high level of fluoride. Some of the piped water systems were bacteriologically safe for drinking while others do not conform to the WHO guidelines and the GSA standards as drinking water source. Disinfection was therefore carried out in all the water systems in the region as a follow up to water quality analysis.

5.7.7 Stakeholder Engagement

The Region engaged the WSMT and operational staff of the Tongo Piped Water System and the Tongo District Assembly to enable CWSA manage the Piped Water System. Similar meetings were held for the Duusi Water System, but the community is yet to release the water system to the Regional Office. The WSMT of the Wiaga Water System were also met in order for CWSA to manage the water system. Also, a community forum was held in Binaba to educate the community so that pipe bursts due to ploughing can be reduced during the farming season.

5.7.8 Status of Ongoing Projects in Upper East Region

The Region is currently implementing five (5) projects which include; Football for WASH Project phase 1 (F4W1), Football for WASH Project phase 2 (F4W2), Enhanced WASH Project in schools, AF-SRWSP and EPA Project. Details of these projects are presented below:

5.7.8.1 UNICEF FOOTBALL FOR WASH PROJECT

The F4WASH Projects 1&2 and the Enhanced WASH Project in schools are being funded by UNICEF. Under the F4W1 Project, twenty-seven (27) new KVIPs have been completed and seventeen (17) existing KVIPs rehabilitated and handed over to the beneficiary schools. Fifteen (15) new boreholes fitted with handpumps have been constructed and handed over. Due to delays in release of funds from UNICEF, construction of thirteen (13) new KVIPs and rehabilitation of existing six (6) KVIPs are still under construction.

The F4W2 Project is additional works to the F4W1 Project which the Region is waiting for the release of funds from UNICEF to implement. The scope of work of the project is construction of twenty-eight (28) new KVIP latrines, rehabilitation of two (2) existing KVIP latrines, drilling and construction of nine (9) new boreholes fitted with handpumps, and rehabilitation of one (1) existing handpump borehole.

5.7.8.2 ENHANCED WASH PROJECT

Under the Enhanced WASH Project in schools, the initial works which involved the construction of fourteen (14) new KVIPs and rehabilitation of seventeen (17) existing KVIPs have been completed. The Region is waiting for the release of funds to implement the additional works which involve the rehabilitation of twenty-six (26) existing KVIP latrines.

5.7.8.3 AF-SRWSP

The additional financing of the Sustainable Rural Water and Sanitation Project in the Upper East Region comprises water and sanitation components. The water component centers on feasibility study and designs for seven pipe systems in fluoride-prone communities in the Bongo District whereas the sanitation component targets ODF in a specified number of communities, construction of teachers' latrines and construction of household latrines. The following activities have been carried out since the inception of the project.

- i. Project information meetings completed
- ii. Community entry/engagements completed
- iii. Training/inauguration of community safeguards facilitators completed
- iv. Pumping Test of existing boreholes & water quality analyses/delineation of new sites for drilling completed
- v. Identification of tank sites/geotechnical investigations completed
- vi. Topographic surveys of pipelines completed
- vii. Draft feasibility and inception reports submitted
- viii. Designs for distribution component completed
- ix. Exploratory drilling of boreholes commenced but work has been suspended

5.7.8.4 EPA PROJECT

The Environmental Protection Agency – Upper East Region has contracted the Region to construct two (2) limited mechanized schemes in two communities, namely Yameriga and Namolgo in the Talensi District. Works commenced in the month of May 2019 with siting and drilling activities leading to the completion of the two (2) boreholes. Currently, civil works in respect of construction of the tank stand is ongoing. The status of the above-mentioned WASH projects on-going in the region is presented in the table below.

Table 5.8: Status of On-going Projects in Upper East Region

Project Name(s)/ Funding Source/ Duration	Amount received or transferred through the region to date (GHS)	Overall Project Target for the Region	Cumulative Achievement (Since Project Inception to end of quarter)	2019-2 nd Quarter Target	2019-2 nd Quarter Achievement	Remarks/ Challenges
Football for WASH/UNICEF/3 MONTHS	1,526,758.50	37No. new KVIP latrines, Rehabilitation of 23No. existing KVIP latrines, drilling and construction of 18No. boreholes fitted with handpumps.	27No. new KVIP latrines completed and handed over. 17No. existing KVIP latrines rehabilitated 15No. successful boreholes fitted with hand pumps drilled.	13No. new KVIP latrines. Rehabilitation of 6No. existing KVIP latrines.	Nil	20% remaining funds to be transferred from UNICEF for the project has delayed which has caused two contractors constructing 13No. KVIPS and rehabilitation of 6No existing KVIPS to halt work.
Football for WASH PHASE 2/UNICEF/3 MONTHS	-	28No. new KVIP latrines, Rehabilitation of 2No. existing KVIP latrines, drilling and construction of 9No. boreholes fitted with handpumps and rehabilitation of 1No. existing borehole.	Nil	28No. new KVIPS, Rehabs of 2No existing KVIPS. Drilling of 9 new boreholes and rehabs of 1No. borehole.	Nil	UNICEF has delayed in transferring funds for the project.
ENHANCED WASH IN SCHOOLS/UNICEF/ 3 MONTHS	479,822.89	Construction of 14No. new KVIP latrines, Rehabilitation of 43No. existing KVIP latrines	14No. new KVIPS completed and handed over, 17No existing KVIPS rehabilitated.	Rehabilitation of 26No existing KVIPS	Nil	UNICEF has delayed in transferring funds for the project.
AF-SRWSP/IDA-WORLD BANK/6 MONTHS (WATER COMPONENT)	-	Feasibility study Report; Designs for 7No. Pipe Systems	All activities completed except exploratory drilling	-	Completion of procurement process; drilling of 2 successful boreholes	Work suspended due to contractor's inability to access funds
AF-SRWSP/IDA-WORLD BANK/9 MONTHS (SANITATION COMPONENT)	424,521.00	Enter 120 communities; achieve 100 ODF; Construction of 3350 HHLs; construction of 89 Teachers' latrines	120 communities entered; achieved 45 ODF; 2888 HHLs constructed; 6 Teachers' latrines constructed	Enter 120 communities; achieve 70 ODF; Construction of 1000 HHLs; construction of	30 communities entered; achieved 45 ODF; 1312 HHLs constructed; 6 Teachers' latrines constructed	-

Project Name(s)/ Funding Source/ Duration	Amount received or transferred through the region to date (GHS)	Overall Project Target for the Region	Cumulative Achievement (Since Project Inception to end of quarter)	2019-2nd Quarter Target	2019-2nd Quarter Achievement	Remarks/ Challenges
				100 Teachers' latrines		
EPA PROJECT	51,499.36	Construction of 2No. LMS	Drilling of 2 boreholes completed;	To complete the entire project	Completion of 2 boreholes	Project could not be completed on schedule due to delay in release of funds by the client

5.8 UPPER WEST REGION

CWSA Upper West Region during the second quarter continued with the supervision of eleven (11) Small Towns Piped Systems under the management of CWSA in the region. Monitoring of UNICEF-Assisted WASH Projects and facilities in schools and communities continued during the quarter. The Region also monitored and supervised the rehabilitation and expansion of two (2) Small Town Piped Water Systems in Lambussie and Hamile-Happa (both in Lambussie District) under AF-SRWSP.

5.8.1 Updates on Piped Water Systems Managed by the Region

The Region currently has fourteen (14) water systems under its management. The water systems comprised of; Lawra Piped Water System in Lawra District, Kpongu and Busa Piped Water Systems both in Wa Municipality, Jirapa Piped Water System in Jirapa District, Funsu, Manwe and Goripie Piped Water Systems all in Wa East District, Nandom Piped Water System in Nandom District, Daffiama Piped Water System in Daffiama-Bussie-Issa District, Tumu Piped Water System in Sissala East Municipality, Gwollu Piped Water System in Sissala West, Wechiau Piped Water System in Wa West, and Kaleo and Nadowli Piped Water Systems both Nadowli-Kaleo District. Three (3) of the piped water systems (Nadowli, Kaleo and Funsu) were added during the quarter.

5.8.2 Baseline Data Collection (Survey)

Baseline data for the three (3) water systems brought under the Region's management during the quarter was collected and submitted to Head Office.

5.8.3 Performance Contract

The Upper West Region plans to sign the 2019 Performance Contracts with the fourteen (14) water systems being managed by the Region in the first week of the coming quarter.

5.8.4 Rehabilitation of Piped Water Systems

Rehabilitation of pump houses is currently ongoing in three (3) Small Town Piped Water Systems namely Tumu, Jirapa and Gwollu. Work is about 92% complete. Also, three (3) new pump houses are under construction – two (2) in Tumu and one (1) in Gwollu.

A total of seventeen (17) submersible pumps have been installed on boreholes across five (5) piped water systems – seven (7) in Tumu; three (3) in Lawra; three (3) in Jirapa; two (2) in Gwollu; and two (2) in Nandom. Messrs. Ako Engineering Ltd delivered materials for solar pump installation on five (5) piped water systems in Tumu, Gwollu, Nandom, Lawra and Jirapa. Installation of the solar pumps is expected to be carried out in the next quarter.

5.8.5 Water Quality/Safety Issues

The Region submitted to head office a detailed budget on its 2019 water safety implementation plan. However, the Region is waiting for funds to implement most of the activities. Water quality analysis has started in Kpongu and disinfection and flushing of the lines ongoing in Kpongu and Daffiama Piped Water Systems.

5.8.6. Status Ongoing Projects in Upper West Region

The following are status of ongoing projects in the Upper West Region.

5.8.6.1 AF-SRWSP

Civil works as part of expansion and rehabilitation of two (2) Small Town Piped Water Systems in Lambussie and Hamile-Happa is ongoing. Construction works at both sites are about 70% complete as at 30th June 2019. The Contractors are Rahmex Enterprise Limited (Lambussie) and Aqualogical Technologies Limited (Hamile-Happa).

By the original work schedule with the contractors, both contractors were to complete their contracts by July 2019. However, actual construction work done so far indicates that the July completion date cannot be achieved for both Lambussie and Hamile. Therefore, both contractors have requested for extension of the completion date. It is the expectation of the Regional Office that both projects will be completed and handed over before the end of the third quarter.

Also, drilling of thirty (30) boreholes as sources for ten (10) Piped water systems in five (5) districts is ongoing. A total twelve (12) successful boreholes have been drilled out of twenty (20) attempts made. Contracts for the drilling of 250 boreholes to be fitted with hand pumps have also been awarded in ten (10) lots to six (6) different contractors in five (5) districts; below is details

of the contracts. The contractors have been introduced to sites and ninety-six (96) successful boreholes drilled across the five (5) districts.

Table 5.9: Summary of Drilling Activities in the Various District to Date

District	No. Allocated	Borehole Sites Selected	No. Drilled in Qtr.	No. Successful in Qtr.	No. Dry	Total Boreholes Drilled (Cumulative)	
						Successful	Dry
Nandom	50	Borehole sites selected in previous quarters	63	51	12	51	12
Lawra	50		16	13	3	13	3
Jirapa	50		26	16	10	16	10
Sissala West	50		8	8	0	8	0
DBI	50		10	8	2	8	2
TOTAL	250			123	96	27	96

Table 5.10: Status of Ongoing Projects in the Upper West Region

Project Name(s)/ Funding Source/ Duration	Amount received or transferred through the region to date GH¢	Overall Project Target	Cumulative Achievement (Since Project inception)	Reporting Quarter Target	Reporting Quarter Achievement	Remarks/ Challenges
GoG 20,000 Borehole Project	208,000.00	122 no. boreholes to be drilled and installed with handpumps	116 no. boreholes successfully drilled; 86 pads constructed with 86 handpumps installed	-	-	Pads construction not awarded and handpumps yet to be delivered
Additional Financial Sustainable Rural Water and Sanitation Project (AF-SRWSP) (IDA)	Disbursement by HQ	Rehabilitation and expansion of Lambussie and Hamile-Happa Small Town Water Systems	The two water systems are 70% completed.	Construction at 65% complete	The two water systems are 70% completed.	Facilities are expected to be completed in quarter 3
Additional Financial Sustainable Rural Water and Sanitation Project (AF-SRWSP) (IDA)		Source of establishment for ten (10) Small Town Water Systems	12No Boreholes successfully drilled out of 20 attempts.	Drilling of 30 successful boreholes	12 successful boreholes drilled	Contractor's Rig involved in two (2) successive accidents causing delay in project execution
		Construction of 250 boreholes in 5 districts	96 boreholes successfully drilled	150 boreholes to be drilled	96 boreholes successfully drilled	Late approval of procurement of boreholes
		1,226,281.30	Hygiene and sanitation promotion in 120 communities	Inception meeting held and 99 field facilitators and 22 DICCS members oriented. 69 ODFs achieved. 1,234 Household latrines completed and in use	Achievement of 30 ODF	A total of 69 ODF communities have been achieved with 28 communities as potential ODF.
UNICEF-Assisted WASH Project	7,194,601.46	Construction of 147No. Institutional Latrines in Schools in Disaster Prone communities	141 KVIP latrines completed and handed over.	6 KVIP latrines to be completed and handed over.	10 KVIP latrines completed and handed over.	6 latrines partially completed

5.9 VOLTA AND OTI REGIONS

During the quarter, CWSA-VR continued the implementation of the reform activities in twelve (12) piped water systems. The Region in collaboration with the Central Tongu District Assembly carried out a reconnaissance survey with the STRABAG Team for input into the design of phase three (3) of the project. Highlights of activities undertaken during the quarter are presented below:

5.9.1 Updates on Piped Water Systems Managed by the Region

The Region is currently managing a number of piped water systems. Among these are those that are currently producing water and generating revenue, namely Akatsi, Adidome, Kwamekrom, Ziope, akpokope/Batume Junction, Damanko Kpassa, Banda and Dambai Piped Water Systems. The second category are new water systems that are under construction under the Ghana-Spain Debt Swap Project. These are Anyirawase, Agotime Afegame, Adaklu Mountains Area, Dzolo Gborgame, Amedzofe and Shia Piped Water Systems. The third category include old piped water systems that broke down under community management and are currently undergoing rehabilitation. These are Vakpo, Taviefe and Nkwanta Piped Water Systems. The Region currently has sixteen (16) Piped water systems under its management.

5.9.2 Performance Contract

The region is putting measures in place to sign the performance contract with the water systems in the coming quarter.

5.9.3 Repairs and Maintenance Piped of Water Systems

Repair and maintenance work were carried out on all the water systems under the reform. Works were carried out on the Banda, Damanko-Kpassa, Dambai, and Kwamekrom Piped Water Systems in the Oti Region. Similarly, repair and maintenance works were carried out on Vakpo, Adidome, Akatsi, Ziope, and Akpokope/Batume Junction Piped Water Systems in the Volta Region. These repairs were done to forestall deterioration and delivery of optimum services to the communities.

5.9.4 Rehabilitation of Piped Water Systems

Rehabilitation of pump houses under CWSA reform programme in the region were completed in the previous quarter. Currently, the Region with support from head office has procured the services of Messrs Jua Group Ghana Limited to install two (2) photovoltaic pumps on Akatsi and

Vakpo Water Systems and seven (7) Grid pumps (4No. for Akatsi, 1No. for Taviefe, and 2No. for Vakpo) Piped Water Systems. Installation of the Grid Pumps has been completed on Akatsi and Vakpo whereas that of Taviefe is ongoing. The installation of two (2) Photovoltaic pumps for Vakpo and Akatsi is currently ongoing. Rehabilitation works is still in progress at the Nkwanta Piped Water System in the Oti Region. Works are being done on the pump houses, storage tank, transmission and distribution pipelines. It is envisaged that all the civil works will be completed in the next quarter and the pumps installed as well.

5.9.5 Water Quality/Safety Issues

One (1) borehole each in Batume Junction/Akpokope and Ziope are currently not being used due to presence of high iron and manganese concentration above GSA standards. The water systems do not have water treatment plants for removal of iron and manganese.

5.9.6 Stakeholders Engagement

A stakeholder engagement was organized for the Kete Krachi community in the quarter under review. This became very necessary because of the threats and frightening messages received by the WSMS posted to manage the water system. CWSA-VR made a presentation to stakeholders in Kete Krach at the Kete Krachi West District Assembly Hall. Present at the meeting was the Member of Parliament for Krachi West Constituency, Hon. Helen Adjoa Ntoso, DCE for Krachi West, Hon. Douglas Osei-Nti, the DCD – Mr. Boateng Antwi, Assembly members, Heads of Departments including the Security, Members of the Traditional Council and the District Assembly staff. The Region highlighted the condition of the water systems prior to CWSA's intervention, the inherited indebtedness to VRA/NEDCO, on-going rehabilitation works, and the way forward for improving access to safe water in rural communities and small towns. The presentation also highlighted the condition of Kete Krachi Water Supply System which was at the verge of collapse and the intervention made by CWSA to salvage the situation. All stakeholders especially the General Assembly and the traditional authorities were urged to be part of the reform agenda.

At the end of the session, members expressed gratitude to CWSA for the reform initiative to improve access to safe water in Kete Krachi and its environs. Transition Team was formed to spearhead smooth handing over of the water system to CWSA. The transition team was made of

seven (7) substantive members and two (2) ex-officio members comprising the DCE (chairman of the transition team), representative from the Tradition Council, WSMT chairman, WSMT secretary (representing the operational staff), 3 CWSA members, 2 Assembly members (ex-officio). Provision was also made for co-opted members as and when necessary.

5.9.7. Status of Ongoing Projects in the Volta Region

The sub-section outlines the details of the ongoing projects in the Volta region.

5.9.7.1 Ghana-Spain Debt Swap Programme (DSDP)

The constructional activities of this project started in June 2018. It comprises seven (7) work lots in thirty-five (35) communities. Five (5) of the lots which have their source of water as ground water were expected to be completed by December 2018. The other two lots with sources as surface water were expected to be completed by March 2019. Extensions to the contracts have been granted by the Financiers and the new completion dates are set at end of September 2019.

5.9.7.2 Rotary International/USAID (RI/USAID) Water Collaboration

The drilling and construction work on five (5) boreholes in the Kadjebi and Nkwanta South Districts were completed by the consultant (M/S WATERSITES Ltd) and contractor (M/S JOISSAM GH Ltd). Due to the high level of Manganese in the water for Dodo Akum and Hevi Kpotame, the installation of MWACAFE treatment plants for improved water quality was recommended. In the quarter under review, the evaluation for procurement of a contractor for the construction of the MWACAFE Plants was completed and report submitted to CWSA Head Office for approval.

5.9.7.3 GoG/ UNICEF WASH Project

UNICEF collaborated with the Region to rehabilitate fifteen (15) Institutional KVIP facilities in three (3) districts of the Volta Region. During the quarter under review, the fifteen (15) KVIP Latrines were completed and are waiting for inspection and handing over.

5.9.7.4 GOG/UNICEF WASH PROJECT (Better Life for Girls)

This is a recent project which started about two months ago. Funding is from KOICA through UNICEF for the construction of changing rooms and urinals for selected schools in the North Dayi

and Krachi East Districts. The project is covering thirty-seven (37) schools in the Krachi East District (in OTI Region) and sixteen (16) schools in the North Dayi District of the Volta Region. A reconnaissance survey has been undertaken to substantiate the master list that was received from UNICEF Office in Accra. The bills of quantities are being prepared for the drawings received from UNICEF.

Table 5.11: Status of On-going Projects in Volta Region

Project Name(s)/ Funding Source/ Duration	Amount received or transferred through the region to date	Overall Project Target for the Region	Cumulative Achievement (Since Project Inception to end of quarter)	2019-2 nd Quarter Target	2019-2 nd Quarter Achievement	Remarks/ Challenges
Plan International Ghana Rural Water, Sanitation Hygiene (WASH) Project	-	Provision of 18No. Water facilities in 12 communities in the Afadzato South District	Drilling of 18No. Boreholes in 18 communities completed. Pumping Tested and water quality test ongoing.	Drilling of 18No. Boreholes in 18 communities in the Afadzato South District	Drilling of 18No. Boreholes in the 18 communities completed.	-
UNICEF/GoG Water Safety Plan Monitoring	-	Monitoring of Water Safety Plan in 2 pilot communities	-	To pay 2 monitoring/sanitary inspection visit to the 2 pilot communities	Two monitoring/sanitation inspection visit has been paid to the community	-
Ghana-Spain Debt Swap for Development Programme (DSDP)	e-payment direct to the contractors (GHS6,250,197.22)	18 Water Systems to be built and will serve approx. 69,000 people in 35 communities. 12 STWS & 6 LMS	Water Supply systems for three (3) communities completed	-	Construction in progress	(a) Inclement weather (b) Poor management by contractors (c) Unduly delay in payments
ROTARY/USAID H ₂ O Collaboration WASH Project	e-payment direct to the contractors	5 Boreholes fitted with hand pumps	All boreholes completed. 2 boreholes to be fitted with MWACAFE plants	-	-	-
GOG/UNICEF WASH Project (Better Life for Girls)	-	Construction of Urinals & Changing rooms in 47 schools in North Dayi & Krachi East districts	Tender documents being prepared	-	-	-
GOG/UNICEF WASH Project	-	Rehabilitation of 15 KVIP latrines in Kpando & Keta Municipals and North Dayi District	Rehabilitation works completed awaiting inspection and handing over	-	-	-

5.10 WESTERN AND WESTERN NORTH REGIONS

The Region is currently collaborating with RI-USAID to implement Water and Sanitation programmes in seven (7) selected communities in Wassa Amenfi East and Amenfi Central Districts respectively. WSMT trainings were also undertaken during the quarter under review. The following activities were undertaken during the quarter under review.

5.10.1 Update on Piped Water Systems Managed by the Region

The Region is running fourteen (14) Water Systems under six (6) management units. The water systems include Adjakaa Manso Piped Water System in Wassa Amenfi Central, Asankragwa Piped Water System in Wassa Amenfi West, Yaakase Piped Water System in Aowin District, Beppoh and Insu Siding Piped Water Systems in Prestea Huni-Valley and Jappah Piped Water System in Wassa Amenfi East District.

5.10.2 Baseline Data Collection (Survey)

Preliminary visits have been made to Wassa Akropong and Mpohor. Discussions have been held with the Mpohor District Assembly and a request made to furnish the office with Baseline information on the status of the water system. The results are expected in the next quarter.

5.10.3 Repair and Maintenance of Piped Water Systems

Boreholes and Pumps in Agona Nkwanta Piped Water System were assessed to determine the cause of intermittent flow of water from one of the boreholes during pumping. The assessment revealed that the intermittent flow was as a result of decrease in the yield of the well and therefore the need for rehabilitation. Faulty control panels at Jappah, Beppoh and Old Yakase were repaired within the reporting quarter. HDPE pipe bursts at Jappah, Insu Siding and Amafie Piped Water Systems were also fixed. The installation of Mwacafe plants on the point sources has also been undertaken.

5.10.4 Water Quality Issues

The Water Safety Plan has been completed and forwarded to Head Office and copies sent to all the water system offices. Training for water system staff on the implementation of the safety plan is close to completion and water samples from all the water systems are sent for quality analysis periodically to ensure that water supplied to consumers satisfy GSA and WHO standards.

5.10.5 Stakeholder Engagement

Stakeholder Engagement organized in the Western and Western North Regions on the 8th of March 2019 (in the first quarter) has triggered a positive response from two communities, namely Wassa Akropong and Mpohor. Following letters from the District Assemblies with distress calls for CWSA to intervene, the Regional Office dispatched officers to these communities to assess the state of the water systems in order to inform our next line of action.

5.10.6 Ongoing Projects in Western Region

The Region continued to implement the AF-SRWSP and Rotary International WASH Project during the quarter. The status of these projects is outlined in the table below.

Table 5.12: Status of On-going Projects in Western Region

Project Name(s)/ Funding Source/ Duration	Amount received or transferred through the region to date (GHC)	Overall Project Target for the Region	Cumulative Achievement (Since Project Inception to end of quarter)	2019-2nd Quarter Target	2019-2nd Quarter Achievement	Remarks/ Challenges
AF-SRWSP (Water)	1,100,000.00	2 Small Town Water Systems	2 Small Town Water Systems	2 Small Town Water Systems	Commencement of Works	On-going
AF-SRWSP (Sanitation)	323,211.25	90 ODF communities	-	36 ODF communities	26 ODF communities	On-going
	-	3,350 Household Latrines	-	850 Household Latrines	1,002 Household Latrines	On-going
Rotary	50,350.00	7 Boreholes	7 Boreholes	7 Boreholes	7 Boreholes	

6.0 CHALLENGES

During the quarter under review, the Agency was faced with challenges which obstructed its capacity to effectively deliver WASH services to rural communities and small towns. These challenges were categorised into participation in management, facilitation, operational, and technical. Amongst these challenges include the following;

A. Participation in Management of Piped Water Systems

- ❖ Delay in meeting with the Asantehene to intervene on the resistance of some Chiefs in the Ashanti Region to allow CWSA to manage piped water systems in their communities.
- ❖ Delay in rehabilitation and old age of most water systems affects their efficiency.
- ❖ Delay in installation of submersible pumps on boreholes affects water production and revenue generation.
- ❖ Delay in the completion of piped water systems under the TRAGSA project (Ghana-Spain Debt Swap Project) in Volta region.
- ❖ Agitation and reluctance of some community leaders to hand over their piped water systems to CWSA to manage.
- ❖ Frequent pipe burst on distribution and transmission lines and constant breakdown of control panels causes a lot of down time which results in customer dissatisfaction and agitation.
- ❖ Inability to meet water demand in some communities which presents an opportunity for our competitors (GWCL).

B. Technical

- ❖ Inability to calculate non-revenue water due to inadequate supply of bulk meters and malfunctioning of available or newly replaced bulk meters.
- ❖ Multiple service charge on Smart Meters to customers within a month
- ❖ Destruction of pipelines during road construction in some of the water systems.

C. Financial/Resources

- ❖ Huge arrears of electricity bills left behind by the former managers of the piped water systems.
- ❖ Delay in release of funds from Head Office for the operation and management of piped water systems
- ❖ High customer indebtedness on all the schemes and slow recovery of debts.
- ❖ Inadequate working equipment and sampling point for some borehole sites which causes loss of bolts and nuts.
- ❖ Over-aged vehicles resulting in frequent breakdown, high running and maintenance costs.

D. Operational

- ❖ Absence of water quality laboratory results in huge sums of money spent to conduct water quality analysis

- ❖ Water quality remains a big challenge in majority of the Regions
- ❖ Presence of competing sources in some communities
- ❖ Delays in obtaining water quality test results from external laboratory and high iron content identified in ground waters reduces water consumption levels among consumers.
- ❖ Sitting of household latrines near water systems and boreholes
- ❖ Leaking of some reservoirs causes bacteriological contamination and lack of fence around some pump houses and reservoirs has turn into dumping site
- ❖ Difficulty in accessing some project communities due to poor roads.

E. Power

- ❖ Erratic power supply from ECG/PDS affects the supply of water.
- ❖ Defects in Control Panels as a result of frequent power fluctuations causing burning of water pump motors.
- ❖ Low Voltage affecting regular pumping of water and defects in the wooden poles of dedicated transformers.

7.0 WAY FORWARD

In relation to the challenges numerated above, the following recommendations are made towards effective delivery of improved WASH services to rural communities and small towns in Ghana.

- ❖ CWSA would procure dedicated transformers for water systems that are affected.
- ❖ CWSA would procure some test kits like electrode, photometric, colorimeter, spectrophotometer and the regents which accompany them.
- ❖ CWSA would expedite action on the rehabilitation of some water systems since technical assessment is been done on them.
- ❖ CWSA would safeguard control panels against power fluctuations and enhance the skills of its operational staff.
- ❖ CWSA would increase budgetary allocation per system and engage key stakeholders at the community and DA level to agree on realistic tariffs after installation of meters.
- ❖ CWSA would consult and have a dialog with some chiefs and key opinion leaders who are still reluctant to handing over water systems
- ❖ CWSA would expedite action on deployment of staff and the construction of regional laboratories.
- ❖ CWSA would release funds for the operation and maintenance of water systems on time

- ❖ CWSA would undertake technical assessment of the new bulk meters.

8.0 CONCLUSION

The Agency made some improvements on the performance of Piped Water Systems compare to previous quarter's performance. However, there is the need to improve on performance to meet the overall target for the year. Although implementation of the AF- SRWSP is fully on course, civil works contracts of the new water systems under the project are generally behind schedule. The Agency during the quarter under review intensified its rehabilitation and monitoring activities which improved the quantity and quality of water supplied to rural communities.

Also, collaboration with all stakeholders in the WASH sector continue to deepen whilst chiefs and district assemblies continue to release piped water systems under their jurisdiction for CWSA to manage. Stakeholder engagements will continue in both the reform communities and communities that are yet to participate in the reform. CWSA hopes to address the issues identified in this report which is key to attaining the overall goal and mandate. CWSA will however maintain strong partnership with all rural WASH sector players notably GoG, the sector ministry, allied MDAs, DPs, CSOs, the private sector and MMDAs to ensure timely completion of all ongoing projects.