



Operation Number: **GY-L1025**  
Year- PMR Cycle: **Second period Jan-Dec 2014**  
Last Update: **4/20/2015**  
PMR Validation Stage: **Validated by Representative**

Chief of Operations validation date: **04/22/2015**  
Division Chief validation date: **04/24/2015**  
Country Representative validation date: **05/18/2015**

Inter-American Development Bank - IDB  
Office of Strategic Planning and Development Effectiveness

Operation Profile

Basic Data

Operation name:	Georgetown Sanitation Improvement Program	Loan Number:	2428/BL-GY
Executing Agency (EA):	Guyana Water Incorporated		
Team Leader:	Mellinger,Yvon	Sector/Subsector:	AS
Operation Type:	Loan Operation	Overall Stage:	Fully Disbursed
Lending Instrument:	Investment Loan	Country:	GUYANA
Borrower:	COOPERATIVE REPUBLIC OF GUYANA		Convergence related Operation(s):

Total Cost and Source

	Original IDB	Current Active IDB	Local Counterpart	Co-Financing/Country	Total operation cost - Original Estimate
GY-L1025	\$9,500,000.00	\$9,500,000.00	\$500,000.00	\$0.00	\$10,000,000.00

Available Funds (US\$)

	Current IDB	Disb. Amount to Date	% Disbursed	Undisbursed Balance
GY-L1025	\$9,500,000.00	\$9,500,000.00	100.00%	\$0.00

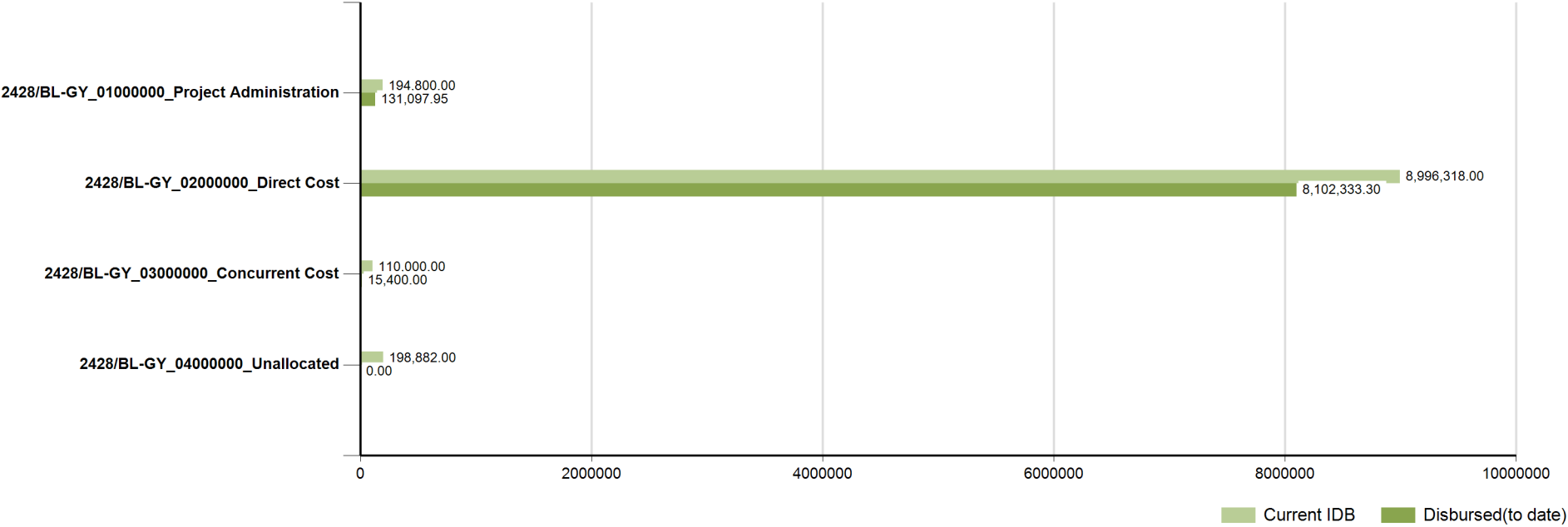
Environmental and Social Safeguards

Main Operation	
Impacts Category:	B
Safeguard Performance Rating:	
Safeguard Performance Rating - Rationale:	

Reformulation Information

Main Operation	
Was/Were the objective(s) of this operation reformulated?	NO
Date of approval:	

Expense Categories by Loan Contract (cumulative values)




## Results Matrix

## Impacts

No information related to this operation.

Outcomes
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Outcome:	1 Georgetown sewerage system performance improved												
Observation:													
Indicators	Flags*	Unit of Measure	Baseline	Baseline Year	Means of verification	Observations	2011		2012	2013	2014	2015	EOP
1.1 Households served by an improved sewerage system	RF	Houesholds	0.00	2010	GWI Statistics; Semi Annual Report		P	0.00	0.00	0.00	8,500.00	4,500.00	13,000.00
							P(a)	0.00	0.00	0.00	8,500.00	0.00	13,000.00
							A	0.00	0.00	0.00	13,000.00		
Outcome:	2 GWI capacity to Operate and Maintain assets increased												
Observation:													
Indicators	Flags*	Unit of Measure	Baseline	Baseline Year	Means of verification	Observations	2011		2012	2013	2014	2015	EOP
2.1 Number of breakdowns per year		breakdowns	354.00	2012	GWI work sheet orders, GWI monthly Board Reports, Semi-annual reports to IDB (Information provided by the Sanitation Department ).		P						
							P(a)			301.00	256.00	217.00	217.00
							A			95.00	38.00		
Outcome:	3 Energy use in Guyana Water Incorporated (GWI) improved												
Observation:													
Indicators	Flags*	Unit of Measure	Baseline	Baseline Year	Means of verification	Observations	2011		2012	2013	2014	2015	EOP
3.1 Energy consumption in 12 pilot facilities		MWh/year	5,946.00	2013	GWI Station Consumption Report, GWI monthly Board Reports, Semiannual reports to IDB		P	3,300.00	3,000.00	2,900.00	2,700.00	2,600.00	2,600.00
							P(a)	3,300.00	3,000.00	2,900.00	4,625.00	4,625.00	4,625.00
							A	3,300.00	3,300.00	5,012.00	4,985.00		

Outcome:	1 Georgetown sewerage system performance improved												
Observation:													
Indicators	Flags*	Unit of Measure	Baseline	Baseline Year	Means of verification	Observations	2011		2012	2013	2014	2015	EOP
1.1 Households served by an improved sewerage system		Houesholds	0.00	2010	GWI Statistics; Semi Annual Report		P	0.00	0.00	0.00	8,500.00	4,500.00	13,000.00
							P(a)	0.00	0.00	0.00	8,500.00	0.00	13,000.00
							A	0.00	0.00	0.00	13,000.00		
Outcome:	2 GWI capacity to Operate and Maintain assets increased												
Observation:													
Indicators	Flags*	Unit of Measure	Baseline	Baseline Year	Means of verification	Observations	2011		2012	2013	2014	2015	EOP
2.1 Number of breakdowns per year		breakdowns	354.00	2012	GWI work sheet orders, GWI monthly Board Reports, Semi-annual reports to IDB (Information provided by the Sanitation Department).		P						
							P(a)			301.00	256.00	217.00	217.00
							A			95.00	38.00		
Outcome:	3 Energy use in Guyana Water Incorporated (GWI) improved												
Observation:													
Indicators	Flags*	Unit of Measure	Baseline	Baseline Year	Means of verification	Observations	2011		2012	2013	2014	2015	EOP
3.1 Energy consumption in 12 pilot facilities		MWh/year	5,946.00	2013	GWI Station Consumption Report, GWI monthly Board Reports, Semiannual reports to IDB		P	3,300.00	3,000.00	2,900.00	2,700.00	2,600.00	2,600.00
							P(a)	3,300.00	3,000.00	2,900.00	4,625.00	4,625.00	4,625.00
							A	3,300.00	3,300.00	5,012.00	4,985.00		

Outcome:	4 Water-related Neglected Tropical Diseases controlled and, where feasible, eliminated in Region 4												
Observation:													
Indicators	Flags*	Unit of Measure	Baseline	Baseline Year	Means of verification	Observations	2011		2012	2013	2014	2015	EOP
4.1 Soil-Transmitted Helminthiasis (STH) and Lymphatic filariasis (LF) prevalence estimated		Assessments	0.00	2010	Ministry of health report of prevalence assessments		P		1.00	1.00	0.00	1.00	3.00
	P(a)							1.00	0.00	1.00	1.00	3.00	
			A		1.00	0.00	1.00						
4.2 Prevalence of Lymphatic filariasis (LF) infection		% of population infected	20.00	2001	Ministry of health report of prevalence assessments		P	0.00	5.00	2.00		1.00	1.00
	P(a)						0.00	5.00	0.00	2.00	1.00	1.00	
			A		3.00		3.00						
4.3 Prevalence of Soil-Transmitted Helminthiasis (STH) infection						The baseline is nationwide, not specific for Region 4 (source: Hall, A. et al., 2009). A more precise and geo-specific baseline will be validated during the first year of the program.	P	0.00	25.00	16.00		10.00	10.00
	P(a)						0.00	25.00	0.00		10.00	10.00	
			A		1.00								
4.4 % of surveyed individuals who know key facts about the diseases (e.g. their causes and symptoms) and about MDA (e.g. that it is harmless, free, targeted at the entire population etc.)		Percentage	0.00	2009	Ministry of health report of KAP survey	The baseline is not available, and will be determined during year 1 of implementation.	P		40.00	60.00		80.00	80.00
	P(a)							40.00	0.00		80.00	80.00	
			A		40.25	0.00							

## Outputs: Annual Physical and Financial Progress

Rehabilitation of Georgetown s sewerage system		Physical Progress			Financial Progress		
Outputs	Unit of Measure		2014	EOP		2014	EOP
Ring main replaced	Kilometers	P	1.50	5.50	P	683,000.00	3,413,907.00
		P(a)	4.20	5.40	P(a)	259,000.00	2,141,907.00
		A	4.10	5.40	A	375,000.00	2,141,907.00
Delivery mains replaced	Kilometers	P	2.00	6.00	P	85,000.00	426,000.00
		P(a)	1.70	4.40	P(a)	333,000.00	1,020,000.00
		A	1.10	4.40	A	512,000.00	1,020,000.00
Sewerage pumps (purchased and) installed	Pumps	P	24.00	24.00	P	359,987.60	1,799,938.00
		P(a)	0.00	24.00	P(a)	53,000.00	1,217,000.00
		A	0.00	24.00	A	42,000.00	1,217,000.00
Existing sewerage pumps installed	Pumps	P	9.00	9.00	P	13,637.20	68,186.00
		P(a)	2.00	9.00	P(a)	30,000.00	133,000.00
		A	2.00	9.00	A	40,000.00	133,000.00
Gravity street sewers assessed	Sewer basins	P	1.00	1.00	P	110,353.80	551,769.00
		P(a)	1.00	2.00	P(a)	75,000.00	1,129,000.00
		A	1.00	1.00	A	329,000.00	482,000.00
Pumping stations rehabilitated	Pumping stations	P	9.00	9.00	P	29,741.00	145,741.00
		P(a)	2.00	9.00	P(a)	570,000.00	1,685,000.00
		A	2.00	9.00	A	629,000.00	1,685,000.00
Gravity street sewers rehabilitated	Meters	P	100.00	200.00	P	23,324.40	116,622.00
		P(a)	50.00	0.00	P(a)	448,000.00	38,000.00
		A	0.00	0.00	A		38,000.00
Combination sewerage tanker purchased	Tankers	P	0.00	1.00	P	0.00	150,000.00
		P(a)	0.00	1.00	P(a)	0.00	351,000.00
		A	0.00	1.00	A	0.00	351,000.00
Institutional strengthening of Guyana Water Inc. (GWI)		Physical Progress			Financial Progress		
Outputs	Unit of Measure		2014	EOP		2014	EOP
Asset management strategy developed	Strategies	P	1.00	1.00	P	15,000.00	150,000.00
		P(a)	1.00	1.00	P(a)	125,000.00	50,000.00
		A	0.00	0.00	A	0.00	0.00
Training sessions performed within Guyana Water Inc. (GWI) on wastewater management and energy efficiency	Training sessions	P	3.00	10.00	P	42,600.00	142,727.00
		P(a)	5.00	11.00	P(a)	98,073.00	229,927.00
		A	5.00	10.00	A	35,000.00	78,927.00
Schools where awareness campaign has been completed	Schools	P	5.00	20.00	P		35,000.00
		P(a)	5.00	26.00	P(a)	17,000.00	4,500.00
		A	7.00	21.00	A	1,000.00	3,000.00
Seminars for hotel and restaurant owners carried out	Seminars	P	3.00	10.00	P	4,500.00	15,000.00
		P(a)	7.00	3.00	P(a)	7,000.00	9,000.00
		A	1.00	2.00	A	2,000.00	4,000.00
Energy efficiency pilot project		Physical Progress			Financial Progress		
Outputs	Unit of Measure		2014	EOP		2014	EOP
Portable measuring equipment purchased	Equipment	P		9.00	P		73,796.00
		P(a)		9.00	P(a)	0.00	68,796.00
		A		9.00	A	0.00	68,796.00
Hydraulic efficiency models completed	Hydraulic models	P		2.00	P		30,000.00
		P(a)		2.00	P(a)		29,000.00
		A		2.00	A	0.00	29,000.00

Pumping stations optimized (rehabilitated, calibrated, etc.)	Pumping stations	P		12.00	P	8,600.00	168,200.00
		P(a)	6.00	12.00	P(a)	44,000.00	116,600.00
		A	6.00	12.00	A	35,000.00	73,000.00
Prevalence Reduction in Water Related Diseases		Physical Progress			Financial Progress		
Outputs	Unit of Measure		2014	EOP		2014	EOP
Baseline survey of Lymphatic Filariasis (LF) and Soil-Transmitted Helminthiasis (STH) prevalence carried out	Surveys	P		1.00	P		14,240.00
		P(a)		1.00	P(a)		6,000.00
		A		1.00	A	0.00	6,000.00
Follow up Lymphatic Filariasis (LF) and Soil-Transmitted Helminthiasis (STH) prevalence surveys carried out	Surveys	P		2.00	P		28,470.00
		P(a)	1.00	2.00	P(a)	0.00	15,000.00
		A	1.00	1.00	A	0.00	0.00
Knowledge Attitudes and Practices surveys carried out	Surveys	P		3.00	P		5,690.00
		P(a)	0.00	2.00	P(a)		6,000.00
		A	0.00	1.00	A	0.00	1,000.00
Drugs (donated or purchased) successfully distributed	Drugs	P	1,045,282.00	5,226,410.00	P	30,000.00	163,032.00
		P(a)	650,000.00	1,796,692.00	P(a)	45,344.00	325,472.00
		A	648,428.00	1,146,692.00	A	126,600.00	208,272.00
Surveys to validate reported drug coverage carried out	Surveys	P	1.00	5.00	P	1,138.00	5,690.00
		P(a)	1.00	1.00	P(a)	2,845.00	20,000.00
		A	0.00	0.00	A	0.00	0.00
Neighbourhood Democratic Councils (NDCs) in which social mobilization and health education workshops are carried out	Councils	P	5.00	30.00	P	8,000.00	57,010.00
		P(a)	15.00	60.00	P(a)	19,000.00	92,000.00
		A	15.00	45.00	A	41,000.00	57,000.00
Management, contingencies and others							

<b>Other Cost</b>		<b>2014</b>	<b>Cost</b>
Project Management for GWI	P	\$50,000.00	\$249,792.00
	P(a)	\$46,000.00	\$210,292.00
	A	\$39,000.00	\$141,792.00
Auditing	P	\$30,000.00	\$120,000.00
	P(a)		\$0.00
	A	\$0.00	\$0.00
Work supervision	P		\$600,000.00
	P(a)	\$300,000.00	\$512,600.00
	A	\$250,000.00	\$441,000.00
Monitoring and Evaluation	P		\$60,000.00
	P(a)		\$74,000.00
	A	\$0.00	\$24,000.00
Contingencies	P	\$617,237.00	\$1,234,474.00
	P(a)	\$360,000.00	\$0.00
	A	\$0.00	\$0.00
Financial charges	P	\$33,000.00	\$131,000.00
	P(a)		\$0.00
	A	\$0.00	\$0.00
Project Management for Unit within Ministry of Health	P	\$6,000.00	\$15,000.00
	P(a)	\$15,495.00	\$15,495.00
	A	\$15,495.00	\$15,495.00

Total Cost		2014	Total Cost
	P	\$2,151,119.00	\$9,971,284.00
	P(a)	\$2,847,757.00	\$9,499,589.00
	A	\$2,472,095.00	\$8,219,189.00

## Changes to the Matrix

Section	Name	Type of Change	Reasons	Entered in the System	Agreed with Executing Agency
Output	Schools where awareness campaign has been completed	Modify Physical P(a) value	The initial end of project target has been achieved and surpassed; however, the Executing Agency will continue to implement awareness campaign among schools. The P(a) for 2015 has been modified accordingly.	4/9/2015	4/9/2015
Output	Gravity street sewers rehabilitated	Modify Physical P(a) value	Initially, 200 m of gravity street sewers were to be rehabilitated, however, based on the assessment conducted (output 1.5) it was concluded that the conditions of pipes were adequate and no major rehabilitation needed to be done. Considering this, the Executing Agency proposed to utilize this, and other savings identified in the Program to perform additional activities, including the assessment of another street sewer basin. The financial and physical P(a) and EOP targets have been therefore modified.	4/9/2015	4/9/2015
Output	Gravity street sewers rehabilitated	Modify Financial P(a) value	Initially, 200 m of gravity street sewers were to be rehabilitated, however, based on the assessment conducted (output 1.5) it was concluded that the conditions of pipes were adequate and no major rehabilitation needed to be done. Considering this, the Executing Agency proposed to utilize this, and other savings identified in the Program to perform additional activities, including the assessment of another street sewer basin. The financial and physical P(a) and EOP targets have been therefore modified.	4/9/2015	4/9/2015
Output	Neighbourhood Democratic Councils (NDCs) in which social mobilization and health education workshops are carried out	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015
Output	Surveys to validate reported drug coverage carried out	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015
Output	Drugs (donated or purchased) successfully distributed	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015
Output	Knowledge Attitudes and Practices surveys carried out	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015
Output	Follow up Lymphatic Filariasis (LF) and Soil-Transmitted Helminthiases (STH) prevalence surveys carried out	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015
Output	Baseline survey of Lymphatic Filariasis (LF) and Soil-Transmitted Helminthiases (STH) prevalence carried out	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015
Output	Pumping stations optimized (rehabilitated, calibrated, etc.)	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015
Output	Hydraulic efficiency models completed	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015
Output	Portable measuring equipment purchased	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015
Output	Seminars for hotel and restaurant owners carried out	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015
Output	Schools where awareness campaign has been completed	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015
Output	Training sessions performed within Guyana Water Inc. (GWI) on wastewater management and energy efficiency	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015

Output	Asset management strategy developed	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015
Output	Gravity street sewers rehabilitated	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015
Output	Combination sewerage tanker purchased	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015
Output	Pumping stations rehabilitated	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015
Output	Gravity street sewers assessed	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015
Output	Existing sewerage pumps installed	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015
Output	Sewerage pumps (purchased and) installed	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015
Output	Delivery mains replaced	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015
Output	Ring main replaced	Modify Means of Verification	The "Means of verification" for the output were included in the output details	4/9/2015	4/9/2015
Output	Neighbourhood Democratic Councils (NDCs) in which social mobilization and health education workshops are carried out	Modify Financial P(a) value	Activities related to this output are expected to be carried out in 2015, the P(a) for 2015 has been modified accordingly.	3/26/2015	3/26/2015
Output	Surveys to validate reported drug coverage carried out	Modify Financial P(a) value	Activities related to this output are expected to be carried out in 2015, the P(a) for 2015 has been modified accordingly.	3/26/2015	3/26/2015
Output	Drugs (donated or purchased) successfully distributed	Modify Financial P(a) value	Activities related to this output are expected to be carried out in 2015, the P(a) for 2015 has been modified accordingly.	3/26/2015	3/26/2015
Output	Knowledge Attitudes and Practices surveys carried out	Modify Financial P(a) value	Activities related to this output are expected to be carried out in 2015, the P(a) for 2015 has been modified accordingly.	3/26/2015	3/26/2015
Output	Follow up Lymphatic Filariasis (LF) and Soil-Transmitted Helminthiases (STH) prevalence surveys carried out	Modify Financial P(a) value	Activities related to this output are expected to be carried out in 2015, the P(a) for 2015 has been modified accordingly.	3/26/2015	3/26/2015
Output	Pumping stations optimized (rehabilitated, calibrated, etc.)	Modify Financial P(a) value	The Executing agency will purchase additional equipment to support the monitoring and operation of the optimized pumping stations in 2015, the P(a) for 2015 has been modified accordingly.	3/26/2015	3/26/2015
Output	Seminars for hotel and restaurant owners carried out	Modify Financial P(a) value	Activities related to this output are expected to be carried out in 2015, the P(a) for 2015 has been modified accordingly.	3/26/2015	3/26/2015
Output	Schools where awareness campaign has been completed	Modify Financial P(a) value	Activities related to this output are expected to be carried out in 2015, the P(a) for 2015 has been modified accordingly.	3/26/2015	3/26/2015
Output	Training sessions performed within Guyana Water Inc. (GWI) on wastewater management and energy efficiency	Modify Financial P(a) value	The Executing Agency will recruit a consultant in 2015 to conduct a study on waste water to increase GWI capacity in this area, the P(a) for 2015 has been modified to reflect this activity.	3/26/2015	3/26/2015
Output	Asset management strategy developed	Modify Financial P(a) value	Activities related to this output are expected to be carried out in 2015, the P(a) for 2015 has been modified accordingly.	3/26/2015	3/26/2015
Output	Pumping stations rehabilitated	Modify Financial P(a) value	In 2014, the Executing Agency anticipated the payment of retention money which had been planned to be released in 2015. The P(a) for 2015 was adjusted to reflect this change.	3/26/2015	3/26/2015
Output	Existing sewerage pumps installed	Modify Financial P(a) value	In 2014, the Executing Agency anticipated the payment of retention money which had been planned to be released in 2015. The P(a) for 2015 was adjusted to reflect this change.	3/26/2015	3/26/2015



Output	Sewerage pumps (purchased and) installed	Modify Financial P(a) value	In 2014, the Executing Agency anticipated the payment of retention money which had been planned to be released in 2015. The P(a) for 2015 was adjusted to reflect this change.	3/26/2015	3/26/2015
Output	Delivery mains replaced	Modify Financial P(a) value	In 2014, the Executing Agency anticipated the payment of retention money which had been planned to be released in 2015. The P(a) for 2015 was adjusted to reflect this change.	3/26/2015	3/26/2015
Output	Ring main replaced	Modify Financial P(a) value	In 2014, the Executing Agency anticipated the payment of retention money which had been planned to be released in 2015. The P(a) for 2015 was adjusted to reflect this change.	3/26/2015	3/26/2015
Output	Surveys to validate reported drug coverage carried out	Modify Physical P(a) value	Due to delays in the recruitment of a Consultant, the validation survey for the second round of Mass Drug Administration (MDA) was not done. It must be noted that according to the WHO Lymphatic Filariasis elimination guidelines, the surveyed coverage should be carried out at least once during the course of the program; however, it does not have to be done after every round of MDA. The third round of MDA is expected to start in the first quarter of 2015 and a validation survey for the third round is planned to be completed in 2015. The P(a) for 2015 has been modified accordingly.	3/26/2015	3/26/2015
Output	Drugs (donated or purchased) successfully distributed	Modify Physical P(a) value	No changes were done to the P(a) for 2015.	3/26/2015	3/26/2015
Output	Knowledge Attitudes and Practices surveys carried out	Modify Physical P(a) value	Only one Knowledge, Attitudes, and Practices (KAP) survey will be completed in 2015 after the third round of Mass Drug Administration (MDA). The P(a) for 2015 has been modified accordingly.	3/26/2015	3/26/2015
Output	Seminars for hotel and restaurant owners carried out	Modify Physical P(a) value	Due to low participation of hotel and restaurant owners in the seminars organized, the Executing Agency will change the strategy to reach this group with relevant information about the use of sewerage network and required waste water treatment of their facilities. Information kits will be distributed and brief one-on-one sessions will be held when delivering the kits. The P(a) for 2015 has been modified to represent this new strategy as one workshop.	3/26/2015	3/26/2015
Output	Training sessions performed within Guyana Water Inc. (GWI) on wastewater management and energy efficiency	Modify Physical P(a) value	In 2015, the Executing Agency will recruit a consultant to conduct a waste water study to increase GWI capacity in this area which will be financed with savings identified in the program. The P(a) for 2015 has been modified to reflect this activity.	3/26/2015	3/26/2015
Output	Gravity street sewers assessed	Modify Physical P(a) value	In 2015, an additional street sewers will be assessed which will be financed with savings identified in the program. The P(a) for 2015 has been modified to reflect this activity.	3/26/2015	3/26/2015
Output	Delivery mains replaced	Modify Physical P(a) value	No changes were done to the P(a) for 2015.	3/26/2015	3/26/2015
Output	Ring main replaced	Modify Physical P(a) value	No changes were done to the P(a) for 2015.	3/26/2015	3/26/2015

Please note that the Overall Stage represents the stage of the operation at the time of this report's publication, which might not necessarily match the stage of the operation during the PMR Cycle to which the report pertains.