

October 29, 2010

Dear Council Member,


IADB and UNEP as Implementing Agencies for the project entitled: ***Regional (Antigua and Barbuda, Barbados, Costa Rica, Guatemala, Guyana, Honduras, St. Lucia, Panama, Suriname): Testing a Prototype Caribbean Regional Fund for Wastewater Management (CReW)***, has submitted the attached proposed project document for CEO endorsement prior to final Agency approval of the project document in accordance with the IADB and UNEP procedures.

The Secretariat has reviewed the project document. It is consistent with the project concept approved by the Council in November 2008 and the proposed project remains consistent with the Instrument and GEF policies and procedures. The attached explanation prepared by IADB and UNEP satisfactorily details how Council's comments and those of the STAP have been addressed.

We have today posted the proposed project document on the GEF website at www.TheGEF.org for your information. We would welcome any comments you may wish to provide by November 30, 2010 before I endorse the project. You may send your comments to gcoordination@TheGEF.org.

If you do not have access to the Web, you may request the local field office of UNDP or the World Bank to download the document for you. Alternatively, you may request a copy of the document from the Secretariat. If you make such a request, please confirm for us your current mailing address.

Sincerely,



Attachment: Project Document
cc: Country Operational Focal Point, GEF Agencies, STAP, Trustee



REQUEST FOR CEO ENDORSEMENT/APPROVAL

PROJECT TYPE: Full-sized Project

THE GEF TRUST FUND

Submission Date: October 29, 2010

PART I: PROJECT INFORMATION

GEFSEC PROJECT ID: 3766

GEF AGENCY PROJECT ID: IDB: RG-X1011; UNEP: GF/1010-

COUNTRY(IES): Countries of the Wider Caribbean - Antigua and Barbuda, Barbados, Belize, Costa Rica, Jamaica, Guatemala, Guyana, Honduras, Panama, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago.

PROJECT TITLE: Testing a Prototype

Caribbean Regional Fund for Wastewater Management (CRew)

GEF AGENCY(IES): IDB, UNEP

OTHER EXECUTING PARTNER(S): UNEP CAR/RCU, Government Agencies, and wastewater management utilities

GEF FOCAL AREA(S): International Waters

GEF-4 STRATEGIC PROGRAM(S): IW-SP-2

NAME OF PARENT PROGRAM/UMBRELLA PROJECT: N/A

Expected Calendar (mm/dd/yy)	
Milestones	Dates
Work Program (for FSPs only)	Nov. 2008
Agency Approval date	Nov. 2010
Implementation Start	Jan. 2011
Mid-term Evaluation (if planned)	Dec. 2012
Project Closing Date	Dec. 2014

A. PROJECT FRAMEWORK¹ (Expand table as necessary) – *See Project Results Framework in Annex A for additional information*

Project Objective: In the context of the Cartagena Convention and its LBS Protocol², to pilot revolving financing mechanisms and their related wastewater management reforms that can be subsequently established as feasible instruments to provide sustainable financing for the implementation of environmentally sound and cost-effective wastewater management measures.

Project Components	Indicate whether investment, TA, or STA ²	Expected Outcomes	Expected Outputs	GEF Financing ¹		Co-Financing ¹		Total (\$) c=a+ b
				(\$M) a	%	(\$M) b	%	
Component 1 - (IDB) Investment and innovative financing for wastewater management	Investment, TA			15.073	6.00	235,990,669 ³	94.00	251,063,669
Subcomponent 1.1: Pilot Financing Mechanisms (PFMs)	TA	Outcome 1 Improved access to financing for waste water management Indicators & Targets • Number of PFMs implemented: 4PFMs • Disbursed \$13m to first generation projects through PFMs:	Innovative financing mechanisms established and functioning in the following locations: • Belize (\$5M) • Jamaica (\$3M) • Guyana ⁴ (\$3M) • Trinidad and Tobago (T&T) (\$2M) Projects are scheduled to generate repayments into the PFMs:	13.000	5.27	233,690,669	94.73	246,690,669

¹ For detailed information on outcomes and outputs refer to Annex A of this document.

² Protocol on Marine Pollution from Land-based Sources and Activities.

³ The co-financing for component 1 has been divided into co-financing directly related to the Pilot Financing Mechanisms and co-financing from IDB loans or grants that finance projects/operations/activities within the WCR with the main goal of reducing pollution caused by discharges of untreated wastewater into the Caribbean sea.

⁴ The Government of Guyana signing the Cartagena convention will be a condition precedent to the execution of a grant agreement for the pilot financing mechanism.

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				(\$M) a	%	(\$M) b	%	
		Belize - \$5M Jamaica - \$3M Guyana - \$3M T&T - \$2M	<ul style="list-style-type: none"> Belize: repayment into the revolving fund starting in year 6 from project initiation Jamaica: Guarantee facility will be reutilized for second round of commercial financing in year 7 from project initiation Guyana: Repayment into the revolving fund will start in year 2 from project initiation T&T: repayment into the revolving fund starting in year 6 from project initiation 					
Subcomponent 1.2 – Project Development Support	TA	Outcome 2 Successful development of projects. Indicators & Targets <ul style="list-style-type: none"> Number of wastewater treatment facilities constructed or rehabilitated through the implementation of first generation projects: Belize - 1 Jamaica - 11 Guyana – 2 T&T- TBD 	First generation projects prepared and developed sustainably: <ul style="list-style-type: none"> Number of pilot projects that have 100% design by year 2 Belize - 1 Jamaica - 3 Guyana - 1 T&T– 1 Number of pilot projects that have 100% design by year 4. Belize - 1 Jamaica - 11 Guyana - 2 T&T – 1 	1.000	30.30	2.30	69.70	3.30
Subcomponent 1.3 – Effective management and development of the pilots through capacity building	TA	Outcome 3 Improvements in technical capacity for project implementation. Indicators & Targets <ul style="list-style-type: none"> PMUs are capable of fully managing all of the elements of the PFM: 4 self-sufficient PMUs with the ability to manage the financial, procurement, project management, technical and environmental component of the PFM and projects. Outcome 4 Reduced land based pollution to terrestrial and	Effective management and development of the pilots through technical capacity strengthening Successful implementation of first generation projects	1.073	100.0	0	0	1.073

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				(\$M) a	%	(\$M) b	%	
		<p>coastal waters from untreated wastewater in pilot project locations.</p> <p>Indicators & Targets:</p> <ul style="list-style-type: none"> • LBS Protocol domestic wastewater effluent limits for the appropriate class of water, where appropriate. <p><u>Class 1 Waters:</u> BOD₅ – 30 mg/L TSS – 30 mg/L pH – 5-10 Faecal Coliform – 200 mpn/100 ml</p> <p><u>Class 2 Waters:</u> BOD₅ – 150 mg/L TSS – 150 mg/L pH – 5-10 Faecal Coliform – n/a</p>						
Component 2 - UNEP Reforms for Wastewater Management				2.5	33.11	5.05	66.89	7.55
Subcomponent 2.1 – Capacity Building – Policy and Institutional Strengthening	TA	<p>Outcome 5: Improved local and national capacity for wastewater management resulting in reduced land-based pollution of terrestrial and coastal waters in the WCR</p> <p>Indicators & Targets</p> <ul style="list-style-type: none"> • No. countries ratifying LBS Protocol and having plans to further implement LBS Protocol: <i>3 additional countries (9 in total)</i> • No. countries have revised current policies, laws or other regulatory frameworks on wastewater management: <i>at least 75% of countries that endorsed the CREW</i> <p>Outcome 6 Improved stakeholder awareness about acceptable,</p>	<p>II.1.1 Documented policy & institutional reforms for wastewater management at national and local levels</p> <p>II.1.2 Country reports demonstrate improved implementation of the LBS Protocol, and in particular its Annex III on domestic wastewater</p> <p>II.1.3 Preliminary accounts for coastal resources and water for 2 demo sites using Environmental and Natural Resources Accounting (ENRA) in wastewater management</p> <p>II.1.4 Documented improvements in financial capacity of wastewater management utilities and services providers</p> <p>II.1.5 Guidelines and best practice modalities in Public-Private Participation in wastewater management</p>	1.540	43.50	2.000	56.50	3.540

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				(\$M) a	%	(\$M) b	%	
		sustainable and cost-effective wastewater management solutions Indicators & Targets •Increased awareness about wastewater management by: (i) policy makers (ii) wastewater managers (iii) National & regional institutions (iv) wastewater professionals (v)Selected Communities (vi) General public: <i>75% of stakeholders</i>	II.1.6 Detailed implementation plan (resources, budget & timetable) for a Monitoring, Evaluation and Reporting (ME&R) system II.1.7 Institutionalized training programmes for wastewater professionals					
Subcomponent 2.2 – Capacity Building – Legislative Reform			II.2.1 Regional toolkit of templates for wastewater management drafting instructions II.2.2 Training workshops for WCR enforcement personnel	0.660	35.11	1.220	64.89	1.880
Subcomponent 2.3 – Capacity Building – Awareness Raising			II.3.1 Increased focus on wastewater management issues by national leadership from improved awareness of wastewater issues II.3.2 Increased coverage of wastewater and sanitation issues in the media from improved awareness of wastewater issues II.3.3 Increased awareness of wastewater and sanitation issues in selected communities II.3.4 Increased teaching of wastewater and sanitation issues in schools II.3.5 Increased participation of community members and other members of the public in process to develop and implement wastewater policy and practices through availability and use of guidelines on public involvement	0.300	14.08	1.830	85.92	2.130

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Project Components	Indicate whether investment, TA, or STA ²	Expected Outcomes	Expected Outputs	GEF Financing ¹		Co-Financing ¹		Total (\$) c=a+ b
				(\$M) a	%	(\$M) b	%	
Component 3 - UNEP Communications, Outreach and Information Exchange				0.710	93.42	0.05	6.58	0.76
Subcomponent 3.1: Project Documentation Development and Training	TA	Outcome 7 Increased interest and demands for Pilot Financing Mechanisms (PFMs) in the WCR Indicator & Target •3 requests for establishing PFMs besides the 5 PFMs planned as part of Component 1. Outcome 8 Increased knowledge, dissemination of information and the use of participatory methods and practices by government agencies, private sector and civil society on wastewater management in the WCR	III.1.1 PFMs, demos and overall project activities, documented through lessons learned, experience notes, and feature articles, that highlight the potential for replication of the CREW project III.1.2 Replication strategy developed III.1.3 Increased dialogue with regional wastewater stakeholders through a series of stakeholder consultations.	0.300	92.31	0.03	7.69	0.33
Subcomponent 3.2 – Integrated Information Management System		Indicators & Targets •Increased dialogue and sharing of data knowledge and skills by government personnel with responsibility for wastewater management: <i>>75% surveyed with increased knowledge and skills</i> •Compiled knowledge and experience about the project shared with other GEF projects and GEF Sec: <i>At least one case study or documentation of each pilot and demonstration performed as part of CReW</i>	III.2.1 Increased access to and use of information related to wastewater management through development of a ‘Clearing House Mechanism’ (CHM) for the WCR	0.410	45.98	0.03	54.02	0.44
Component 4: IDB/UNEP Monitoring & Evaluation	TA	Outcome 9 Effective Project Monitoring and Oversight	Development of a standardized M&E approach	0.760 <i>(IDB 0.670; UNEP 0.090)</i>	47.50	0.84	52.50	1.60

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Project Components	Indicate whether investment, TA, or STA ²	Expected Outcomes	Expected Outputs	GEF Financing ¹		Co-Financing ¹		Total (\$) c=a+ b
				(\$M) a	%	(\$M) b	%	
Component 5: IDB/UNEP Project Management	TA	Outcome 10 Effective project coordination	Project Coordination Group (PCG) established Steering Committee (SC), and Inter-Agency Coordination Group (IACG) established Exit strategy successfully implemented	0.957 (IDB 0.922, UNEP 0.035)	8.92	9,771,734	91.08	10,728,734
Total Project Costs				20.000	7.36	251,702,403	92.64	271,702,403

¹ List the \$ by project components. The percentage is the share of GEF and Co-financing respectively of the total amount for the component.

² TA = Technical Assistance; STA = Scientific & Technical Analysis.

B. SOURCES OF CONFIRMED CO-FINANCING FOR THE PROJECT (expand the table line items as necessary)

Name of Co-financier (source)	Type ¹	Project (US\$M)	%*
Government	Grant and in-kind	75,823,443	30.1%
Government	Loans	15,000,000	6.0%
IDB	Loans	131,500,000	52.2%
IDB	Grant	27,506,960	10.9%
IDB	In-Kind	772,000	0.3%
UNEP	In-Kind	600,000	0.2%
Other Organizations (USTDA)	Grant and in-kind	500,000	0.2%
Total		251,702,403	100%

* Percentage of each co-financier's contribution at CEO endorsement to total co-financing.

¹ See Annex F for the detailed information.

C. FINANCING PLAN SUMMARY FOR THE PROJECT (\$M)

	Project Preparation a	Project B	Total c = a + b	Agency Fee	For comparison: GEF and Co-financing at PIF
GEF financing	380,000	20,000,000	20,380,000	2,000,000	20,380,000
Co-financing	1,230,000	251,702,403	252,932,403		252,909,500
Total	1,610,000	271,702,403	273,312,403	2,000,000	273,289,500

D. GEF RESOURCES REQUESTED BY AGENCY(IES), FOCAL AREA(S) AND COUNTRY(IES)¹

GEF Agency	Focal Area	Country Name/ Global	(in \$)		
			Project (a)	Agency Fee (b) ²	Total c=a+b
IDB	International Waters	Global	16,665,000	1, 666,500	18,331,500
UNEP	International Waters	Global	3,335,000	333,500	3,668,500
Total GEF Resources			20,000,000	2,000,000	22,000,000

¹ No need to provide information for this table if it is a single focal area, single country and single GEF Agency project.

² Relates to the project and any previous project preparation funding that have been provided and for which no Agency fee has been requested from Trustee.

E. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

<i>Component</i>	<i>Estimated person weeks</i>	<i>GEF amount (\$M)</i>	<i>Co-financing (\$M)</i>	<i>Project total (\$M)</i>
Local consultants*	1029	1.55	0.10	1.65
International consultants*	226	0.41	0.00	0.41
Total	1255	1.96	0.10	2.06

* Details e provided in Annex C.

F. PROJECT MANAGEMENT BUDGET/COST

<i>Cost Items</i>	<i>Total Estimated person weeks</i>	<i>GEF amount (\$M)</i>	<i>Co-financing (\$M)</i>	<i>Project total (\$M)</i>
Local consultants*	241	0.25		0.25
International consultants*	212	0.51		0.51
Office facilities, equipment, vehicles and communications*			0.69	0.692
Hosting SC Meetings		0.075	0.08	0.155
Travel*		0.122		0.122
Others**				0
M&E				0
Audits				0
PMUs			9.00	9.00
Total	453	0.957	9.77	10.73

* Details provided in Annex C. ** For others, it has to clearly specify what type of expenses here in a footnote.

- G. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT?** yes ☒ no ☐
 (If non-grant instruments are used, provide in Annex E an indicative calendar of expected reflows to your agency and to the GEF Trust Fund, and/or revolving funds that would be set up.).

H. DESCRIBE THE BUDGETED M & E PLAN:

The CReW project will have an adaptive management approach with a robust Monitoring and Evaluation Plan (M&E Plan) to monitor and evaluate progress, performance and achievements of the project and its subprojects to enable timely identification of deviations, implementation of corresponding modifications, and the continuous improvement of strategies and activities. The M&E Plan is aligned with the standard monitoring and evaluation procedures of GEF, IDB and UNEP. Additionally, the M&E Plan, including the stress reduction and process indicators, is in line with GEF-IW Strategic Program No.3 and for recording in the *GEF 4 Tracking System*.

The M&E Plan is composed of two elements: (a) monitoring of progress; and (b) evaluation of performance and achievement. Both elements will be applied to the project using comparable sets of indicators. The Project Coordination Group (PCG) will be in charge of monitoring the progress of project execution against agreed benchmarks, and assessing the continued viability of the Project. The M&E process will include the following reports: (i) inception report; (ii) quarterly progress reports; (iii) quarterly and annual financial reports; (iv) annual progress reports; (v) financial audit annually and at project completion; (vi) annual co-financing reports; (vii) mid-term evaluation (MTE); (viii) project completion report; and (ix) terminal evaluation (TE).

TABLE 1: MONITORING AND EVALUATION REPORTS

Report and Content	Timing	Responsibility
Inception Report		
Project implementation plan	Draft developed. Final version following inception workshop. Updated as needed.	PCG building on Executing Agency inputs and in consultation with IDB and UNEP
Annual Operating Plan		
<ul style="list-style-type: none"> - List of activities to be implemented each year - Timeline 	Draft for first year developed. Final version after inception workshop	Executing Agencies-coordination by PCG, in consultation with IDB and UNEP
Quarterly Progress Report		
<ul style="list-style-type: none"> - Progress and activities completed; - Progress against annual work plan; - Review of implementation plans, - Summary of problems and adaptive management; - Activity plans for the next quarter; and - Project outputs for review 	Quarterly, within 15 days of each reporting period	Executing Agencies-coordination by PCG
Quarterly and Annual Financial report		
<ul style="list-style-type: none"> - Project expenditures according to established project budget and allocations; - Budgetary plans for the next quarter; - Requests further cash transfers; - Requests budget revision as necessary; and - Inventory of non-expendable equipment procured for project 	Quarterly, within 15 days of each reporting period	Executing Agencies-coordination by PCG
Annual Progress Reports (Project Implementation Review - PIR)		
<ul style="list-style-type: none"> - Consolidated review of progress and outputs of project actions; - Progress against Annual work plan; - Best practices and lessons learned; - Progress plans and budgetary requirements for the following reporting period; - General source of information for general project reporting; and - PIR 	30 days after the end of the period	Executing Agencies-coordination by PCG in consultation with IDB and UNEP
Procurement Plan		
<ul style="list-style-type: none"> - Procurement plan for upcoming 12 months 	Annually	Executing Agencies-coordination by PCG
External Financial Audit		
<ul style="list-style-type: none"> - Audited Financial Statements 	Annually and at project completion	Independent auditor – hired by Executing Agencies
Co-financing Report		
<ul style="list-style-type: none"> - Co-financing provided to the project; and - Co-financing inputs against GEF approved financing plan 	Annually	Executing Agencies-coordination by PCG

Report and Content	Timing	Responsibility
Mid-term Evaluation		
<ul style="list-style-type: none"> - Detailed independent evaluation of project management, actions; - Outputs and impacts at mid-term; - Recommendations for remedial action and/or revision of work plans as appropriate 	Quarter immediately following project mid-term	Independent Evaluator – hired by IDB and UNEP as GEF agencies
Project Completion Report		
<ul style="list-style-type: none"> - Consolidated review of project effectiveness, progress towards outcomes and technical outputs of project actions; - Final best practices and lessons learned; - Report on project expenditures 	Two months before project completion	PCG with input from Executing Agencies
Terminal Evaluation		
<ul style="list-style-type: none"> - Independent evaluation of project management, actions, outputs and impacts; - Sustainability analysis - Project effectiveness; - Technical outputs; - Lessons learned; - Progress towards outcomes 	Within 6 months of project completion	Independent Evaluator(s) – hired by IDB and UNEP as GEF agencies

Both the MTE and the project terminal evaluation (TE) will be conducted by independent evaluators. The MTE will be performed during the quarter immediately after the mid-term point of project execution (at the end of 24 months from the date of GEF approval), regardless of the level of execution and disbursement. The purpose of the MTE is to identify corrective measures and/or changes to the intended work plan of the CReW. The MTE will focus on the following: (i) level of progress in attaining the project objectives stated in the Results Matrix; (ii) level of acceptance of procedures developed under the project; and (iii) degree of effectiveness of the internal and the IDB's and UNEP's monitoring and supervision system.

The TE will include an analysis of the attainment of global environmental objectives, project objectives, delivery and completion of project outputs/activities, and outcomes/impacts (based on indicators). Evaluation of project achievements will be done according to GEF Project Review Criteria specifically as this includes the implementation approach; country ownership; stakeholder participation; sustainability, replication approach; financial planning; cost-effectiveness; monitoring and evaluation. The TE will also present and analyze main findings and key lessons, including examples of best practices for future projects in the country, region, and the GEF. The TE will also have an annex explaining any differences or disagreements between the findings of the evaluation team, the EA or the GEF recipient organization.

Supervision missions by IDB and UNEP will be conducted regularly throughout the implementation of the Project to monitor relevant environmental, technical, operational and financial aspects of the Project.

The PCG will be responsible for developing the system for gathering and maintaining the data related to the different indicators included in the Results Framework. The PCG will review the proposed indicators, determining the methodology and gathering the data for baseline indicators during the first semester of execution. The indicators to monitor project performance and achievements will be related to the following outcomes: (i) improved access to financing for

wastewater management; (ii) successful development of projects; (iii) improvements in technical capacity for project management; (iv) reduced land based pollution to watersheds and coastal waters in the pilot locations; (v) improved local and national capacity in support of wastewater management and subsequent reduction in land-based pollution to adjacent watersheds and coastal waters; (vi) improved stakeholder awareness about acceptable, sustainable and cost-effective wastewater management solutions; (vii) increased interest and demands for PFMs in the WCR; (viii) increased knowledge, dissemination of information and the use of participatory methods and practices by government agencies, private sector and civil society on wastewater management in the WCR; (ix) effective project monitoring and oversight; and (x) effective project coordination .

Project indicators have been selected to represent the essential activities within the project scope and are in line with the principles of SMART⁵ indicators. In order to also evaluate effective operations of the project, the M&E Plan will include indicators related to timeliness of progress reports; achievement of performance targets, outputs and outcomes; promptly implementation of corrective actions when required; timely disbursements; and evidence of sound financial practices in audit reports.

Financing and Costs

Financing for the M&E activities is included in the table below.

Summary of Indicative M&E Financing	
Financing Source	Total M&E US\$
GEF Financing	US\$ 760,000
Counterpart Financing **	US\$ 840,000
Total Indicative Financing	US\$ 1,600,000

** Details for M&E co-financing can be found in Annex F.

PART II: PROJECT JUSTIFICATION:

A. STATE THE ISSUE, HOW THE PROJECT SEEKS TO ADDRESS IT, AND THE EXPECTED GLOBAL ENVIRONMENTAL BENEFITS TO BE DELIVERED:

STATEMENT OF ISSUES: The degradation of the Caribbean marine environment, including through the discharge of untreated wastewater, is a serious concern for those countries whose livelihoods depend heavily on their natural marine resources. Numerous scientific studies, including UNEP/GPA's 2006 report on the *State of the Marine Environment*, singled out untreated wastewater entering the world's oceans and seas as the most serious problem contributing to marine pollution. In the region, the recent Caribbean Sea Ecosystem Assessment (CARSEA) study similarly found that "sewage pollution from land sources and from ships has been the most pervasive form of contamination of the coastal environment."

Scientists have identified a number of serious consequences of marine pollution caused by untreated wastewater. In 2001, UNEP/GPA concluded that pathogenic organisms in waters contaminated by wastewater discharges cause "massive transmissions of infectious diseases to bathers and consumers of raw and undercooked shellfish"; researchers estimated the global

⁵ SMART Indicators are specific, measurable, achievable, relevant, and time bound

impact at US\$10 billion per year. GESMAP scientists concurred that infection of seafood and shellfish occurs through the disposal of urban/domestic wastewater. They also advised that “there is massive epidemiological evidence that enteric and respiratory diseases can be caused by bathing/swimming at marine coastal beaches contaminated [through] exposure to pollution from domestic wastewater sources.” Discharge of untreated wastewater has other impacts as well. The CARSEA study found that sewage was one of the main factors that had caused some 80 percent of living coral in the Caribbean to be lost over the past twenty years.

Damage by untreated wastewater to the marine environment including living coral can bring about severe economic consequences for people in the Caribbean. The CARSEA study noted that “the Caribbean is the region in the world most dependent on tourism for jobs and income,” while “fishing is also a significant source of both income and subsistence.” Yet both of these sectors are directly threatened by environmental degradation including due to wastewater discharge. To look just at the importance of coral reefs to the economy of Tobago: the World Resources Institute recently estimated that coral reefs currently provide upwards of US\$100 million per year in benefits associated with tourism, US\$18-33 million in shoreline protection, and another US\$1million in benefits to fisheries. These benefits represent about half of the island’s annual GDP. The potential economic harm to the region from further damage to the marine environment is enormous. It is for reasons like this that, for the wider Caribbean as well as seven other regions examined around the world, GESAMP scientists reported that controlling the discharge of untreated sewage represents the number one priority for protecting the oceans from land-based activities.

Further, as sea levels rise, incidents of damage to coastal waters will increase due to additional sewage and open sewerage overflow incidents. National and local governments will need to address these developments in their long-term capital planning and resource allocation decisions.

There is thus an urgent need to increase the coverage of wastewater treatment in the Caribbean, which at present is far below needed levels. UNEP/GPA estimates that as much as 85 percent of wastewater entering the Caribbean Sea is currently untreated. According to the Pan American Health Organization (2001), 51.5 percent of households in the Caribbean Region lack sewer connections of any kind; only 17 percent of households are connected to acceptable collection and treatment systems. Within Caribbean SIDS, less than two percent of urban sewage is treated before disposal; this is even lower in rural communities. On some islands (e.g., Antigua and Barbuda, Dominica, Haiti) there is no sewerage system; sewage is disposed mainly through septic tanks and pit latrines, many of which do not comply with minimum technical specifications or are not adequately maintained. Indeed, as a result of rapidly expanding populations, poorly planned development, and inadequate or poorly designed and malfunctioning sewage treatment facilities in most Caribbean countries, untreated sewage is often discharged into the environment with serious human and ecosystem health implications. Added to this is the discharge of untreated or partially treated sewage from many tourism facilities. Such a situation is responsible for the serious health, environmental and economic impacts noted above.

In recognition of the gravity of this situation, a number of Countries from the Wider Caribbean Region (WCR)⁶ have ratified the Convention for the Protection and Development of the Marine

⁶ As defined in the Cartagena Convention, the *Wider Caribbean Region* comprises the marine environment of the Gulf of Mexico, the Caribbean Sea and the areas of the Atlantic Ocean adjacent thereto, south of 30 north latitude and within 200

Environment in the WCR, also known as the Cartagena Convention (adopted in Cartagena, Colombia on 24 March 1983), and signed the Protocol on Land Based Sources (LBS) of Marine Pollution, which was adopted on October 6, 1999 (see Annex J). The LBS Protocol sets several goals to govern domestic sewage discharges into the waters of the Wider Caribbean.

While countries thus increasingly recognize the importance of improving wastewater management, obstacles exist in implementing the obligations of the LBS Protocol and taking required national actions. UNEP GPA reported in their 2006 *State of the Marine Environment Report* that significant financial constraints exist: there is a lack of adequate, affordable financing available for investments in wastewater management in the WCR. Smaller communities in particular often find it difficult to obtain affordable financing for such improvements.

In addition to financial constraints and barriers, other substantial barriers also exist. These include inadequate national policies, laws and regulations; limited enforcement of existing laws and regulations; limited communication and collaboration between various sectors and agencies, which contributes to a fragmented approach to wastewater management; and limited knowledge of appropriate alternative and low cost wastewater treatment technologies and analytical capacity to use them. Other limitations in technical capacity (e.g., in developing project proposals, operating and maintaining wastewater treatment systems, and monitoring and analyzing wastewater discharges and impacts) constrain progress in effectively managing wastewater. In addition, wastewater treatment is considered by many water utility managers and stakeholders as a low priority. Due to various reasons water supply generally ranks first, with the second priority being the collection of sewage by means of covered sewerage systems due to health concerns, followed lastly by wastewater treatment. Presently countries often engage in “opportunistic capital planning” based on the availability of funding from donors or governments, and not on best value and net economic benefit.

Therefore, developing innovative financial mechanisms and making affordable resources available to assist countries in the WCR to establish or expand domestic wastewater management programs and policies, based on national and local community needs, constitutes a priority for the region.

HOW THE PROJECT SEEKS TO ADDRESS THE ISSUES: In response to the above mentioned situation, the IDB and UNEP are proposing to establish a Caribbean Regional Fund for Wastewater Management (CReW). The main objective is to create pilot financial mechanisms that can be used to provide sustainable financing for environmentally sound and cost-effective wastewater management. The other objectives of the project are to facilitate policy and legal reforms, regional dialogue, and knowledge exchange with the key stakeholders in the Wider Caribbean. The CReW project will be composed of the following five components:

nautical miles of the Atlantic Coasts of the United States. The countries of this region (who are also members of the Caribbean Environment Programme) are as follows: Antigua and Barbuda, Bahamas, Barbados, Belize, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Saint Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, and Venezuela.

Figure 1: Project Structure

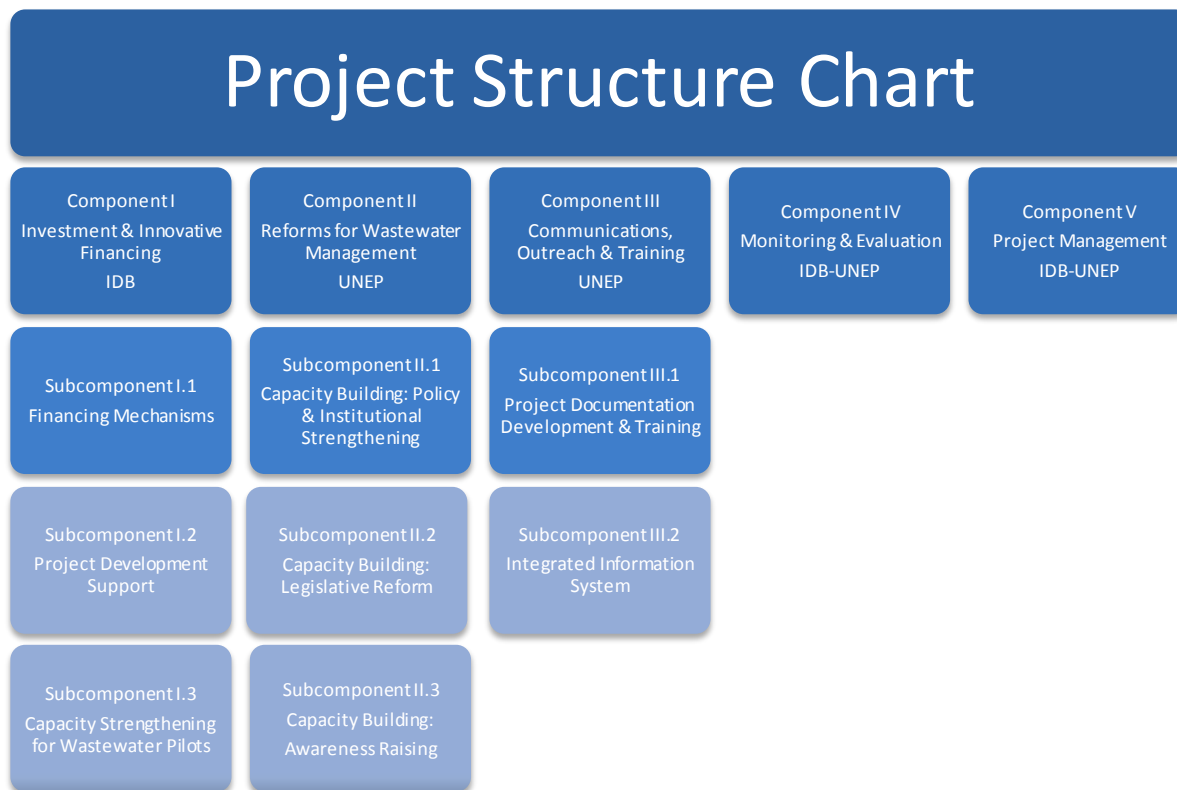
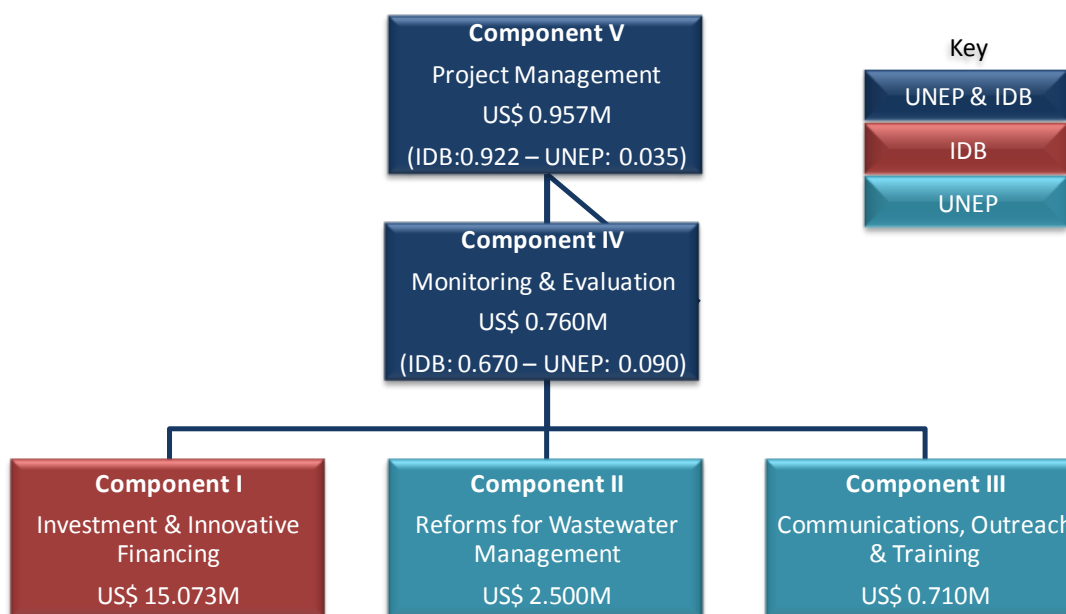


Figure 2: Project Cost Allocation



Component 1 – Investment and innovative financing for wastewater management - (US\$ 15.073 million) – IDB

The component would finance: (i) US\$ 13 million for individual Pilot Financing Mechanisms (PFM) that will provide and test pilot financing modalities for wastewater management projects; (ii) US\$ 1.0M for a Project Development Support (PDS) to provide technical assistance, such as design assistance, to bring the first generation of projects to be financed by the PFMs to a “bankable” status; And (iii) US\$ 1.073 million for strengthening the technical capacity at the pilot level. The activities under this component will be complemented by activities financed under the IDB Water and Sanitation Initiative for wastewater management in the countries that endorsed the CReW. The total estimated value allocated to wastewater projects in these countries is estimated at approximately US\$ 221 million.

A process of identification of PFMs that could be suitable for CReW assistance was conducted in consultation with water utilities, service providers, vendors, and key policy makers in the region. The location of the PFMs and the first generation project selection were a demand-driven process based on requests following presentations made by the IDB staff and consultants at two annual meetings of the Caribbean Water and Wastewater Association. These presentations focused on the scope and implementation of the CReW program and called on local utilities and wastewater project sponsors to come forward with project proposals. In addition the IDB conducted one-on-one meetings with utility representatives from the region to seek their input and response to the CReW initiative. Each PFM was built around the first generation project under development. This allowed the design of the financial models to reflect local financial conditions, regulatory frameworks, water utility capacity and national government objectives.

All of the projects identified have the following characteristics: (1) high priority projects for water/wastewater services providers; (2) high impact in terms of significant improvements or prevention from further deterioration in the quality of coastal waters; (3) potential to stimulate policy reforms; (4) include feasibility assessments and cost/benefit analyses; and (5) requirement for innovative financial and advisory assistance to bring project financing costs within ratepayers’ ability to pay.

Subcomponent 1.1 Pilot Financing Mechanisms (\$13 million)

Four PFMs were identified, and the respective first generation projects for the four PFMs have been identified and are summarized below (see Annex I for more information):

- i. **Credit Enhancement Facility in Jamaica – US \$3 million:** *Credit enhancement support for local commercial bank financing of 11 wastewater projects in Jamaica.* Under the proposed structure, the CReW funds will be pledged to local lenders as collateral for the financing of approximately US\$ 7 million in initial wastewater projects, to be executed by the National Water Commission (NWC), the national water and wastewater utility in Jamaica. Currently in Jamaica, a K-factor surcharge is collected through the water bill and is allocated into a special account for wastewater investment projects. As the K-factor funds are collected on a monthly basis, it was envisioned that rather than using the K-factor funds directly for capital investments, the funds can be better used as debt servicing for larger, commercial bank loans. In order to incentivize the commercial banks to lend to the NWC, the CReW funds will be placed into a reserve

account⁷ and will act as a secondary assurance to commercial lenders in the event that the flow of K-factor funds should become temporarily unavailable. The first projects to be implemented from this guarantee are 11 projects involving either the rehabilitation of an existing wastewater facility or the construction of a new wastewater facility.

- ii. **National Wastewater Revolving Fund in Belize – US \$5 million:** Creation of the Belize Wastewater Revolving Fund (BWRF) to provide zero or below market interest rate loans for eligible wastewater treatment projects in Belize. The BWRF will be governed by a Board of Directors, to be appointed by the Prime Minister of Belize, and the Belize Water Services Limited (BWSL) would have operational responsibilities for the BWRF. The first project to be financed under the BWRF would be an inter-municipal wastewater treatment system for the Placencia Peninsula, an area in Belize that is confronted by pressures from both the growth in tourism and the lack of wastewater collection and treatment. The long-term benefits from the establishment of a functioning wastewater collection and treatment system is recognized by the Government of Belize and the government is ready and willing to adapt policy reforms to accommodate for the successful implementation of the project. The other innovative aspect of the project is the incorporation of financial contributions from the government and potentially the private sector players in Placencia.
- iii. **National Revolving Wastewater Fund in Guyana – US \$3 million:** The National Wastewater Revolving Fund will be created to support the efforts of the Government of Guyana (GOG) to finance improvements in the wastewater sector. The fund will be executed and managed by the Ministry of Housing and Water. Currently, only two sewerage systems exist in Georgetown, which only serve 54,000 people out of a population of 175,000. In areas not served by the sewerage systems in Greater Georgetown, wastewater disposal is by septic tanks and pit latrines with more than 90% of the housing units served by septic tanks. Conceptually, the establishment of a Guyana Wastewater Revolving Fund (GWRF) would allow for the financing of a variety of wastewater solutions through both public and private channels. In recent discussions with the Government of Guyana (GOG), specific first-generation project will involve the participation of the largest beer brewery in Guyana, Banks DIH, with the installation of a wastewater treatment plant to ensure that all discharges from the production process into the rivers and streams are environmentally acceptable and conforms to all government requirements and EPA regulations. The proposed wastewater treatment plant is envisioned to be constructed in a modular fashion as to allow for expansion of wastewater treatment into the surrounding areas, which currently consists of a mixture of residential and industrial occupants, and will contribute directly to the expansion of wastewater services in the Greater Georgetown area. The first modular unit is estimated to cost upwards of US\$1 million. Other conceptual frameworks for the first generation projects include the formalization of the septic tank management and establishment of regulation for the collection and disposal of sewage for non-sewered areas in Georgetown.
- iv. **National Revolving Wastewater Fund in Trinidad & Tobago⁸ – US \$2 million:** - The National Wastewater Revolving Fund has been conceptualized to support the efforts of the Government of Trinidad and Tobago (GOTT) to finance improvements in the

⁷ Per GEF's policy, any investment income generated during the time of CReW funds remain in the reserve account will be returned to GEF.

⁸ This pilot had originally been designed to be a joint CDB-IDB effort to test a pilot for the Eastern Caribbean States. The CDB officially declined to participate at the end of July, 2010, leaving a gap in the pilot operations. As discussions with T&T were initiated earlier in 2010 but were temporarily suspended due to lack of available funds under the CReW, it was decided to reinstate discussion with the GOTT.

wastewater sector. During earlier discussions with the GOTT on the CReW, it was envisioned that the fund would be executed and managed by the Ministry of Planning, Housing and the Environment. Two options were identified as the most crucial interventions: (i) by-pass financing for abandoned wastewater treatment facilities in Trinidad: Under this model, the CReW funds will be used to assist Water and Sewerage Authority (WASA) in the financing of the by-pass initiative in Trinidad. As there are over 20 abandoned wastewater treatment plants in proximity to a centralized wastewater treatment facility, it was proposed that a revolving fund will be created to finance by-passes and invest in two portable wastewater treatment modules; (ii) wastewater treatment financing for Tobago where the revolving fund would be established in Tobago offering zero-interest loans for private sector stakeholders (including local hotel owners and commercial developers) towards installation of wastewater treatment facilities, either on-site or a joint plant if few establishments are within proximity of each other . The private sector stakeholders would, as a condition of the concessionary financing, contribute a portion of the total financing (5%-10%) upfront, to be transferred to the revolving fund. In June 2010, elections took place in Trinidad & Tobago, and a new Government has come into power. While all indications are that the new GOTT is equally enthusiastic, if not more so, with regards to the CReW, discussions will be reinitiated formally with the GOTT once the National Strategic Plans are finalized in the coming months.

As a result of the establishments of the PFMs, first generation projects will be financed and implemented. The success of the PFMs will be dependent on the availability of financial resources as well as local capacity for implementation. Since these mechanisms are being tested in the WCR, the remaining funds for Component 1 will be used to ensure that adequate capacity for the implementation of the pilot projects exists at the national level. It is recognized that a good project management unit is key to the successful implementation of projects so funds will also be used to hire one staff at each PMU (\$0.5 million). In addition, funds from this component will be used to hire a technical specialist, fund travel to the projects for the technical specialist on a quarterly basis and as needed, participation in meetings, and other technical assistance activities (\$0.573M). The technical specialist will provide technical support to the PMUs during the project design, procurement and construction activities to ensure that the appropriate industry best practices and project mandates are followed. More detailed information is found under subcomponents 1.2 and 1.3.



Subcomponent 1.2 Project Development Support (\$1 million)

The Project Development Support will have a budget of \$1 million that will be used to fund design services as part of the development of each project to get it ready for construction. It has been the IDB's experience that the successful completion of a project is driven by several political, technical, economic and environment factors. From a technical point of view the effective and efficient development and design of a project typically minimize construction

issues and ensures a high probability of the project operating as intended at completion. The operation of the project at the end of construction is critical because it ensures repayment of the loan but also that the investment will be used towards its intended purpose, which in this case in the reduction of pollutants to the Caribbean Sea.

It is for these reasons that a PDS was included as part of Component 1. The structure of the PDS mirrors IDB's current approach, which has been successful over the years. The proposed allocation by project is summarized below.

Pilot Projects	PDS Allocation	Co-financing Identified⁹	Total
Jamaica	\$100,000	\$1,150,000	\$1,250,000
Belize	\$300,000	\$850,000	\$1,150,000
Guyana	\$300,000	\$350,000	\$650,000
Trinidad & Tobago	\$300,000		\$300,000
Total Financing	\$1,000,000	\$2,350,000	\$3,350,000

Subcomponent 1.3 Technical Capacity Strengthening for Wastewater Pilots (US\$ 1.073M)

This subcomponent will have a budget of \$1.073 million that will be used for the following:

- **Project Management Unit (PMU) support** (\$0.500 million) –It is recognized that a good project management unit at the country level is key to the successful implementation of projects; therefore this subcomponent will be used to fund one technical staff for each PMU.
- **Technical Assistance** (\$0.573 million) – This will be used to hire a technical specialist, fund travel to the projects for the technical specialist on a quarterly basis and as needed, participation in meetings, and other technical assistance activities. The technical specialist will provide technical support to the PMUs during the project design, procurement and construction activities to ensure that the appropriate industry best practices and project mandates are followed.

Component 2 – Reforms for wastewater management - (US\$ 2.500 million) – UNEP

This policy, institutional and legislative reform component, will finance actions for improved wastewater management that is consistent with the Global Programme of Action (GPA) Strategic Action Plan Guidelines on Municipal Waste Water Management. This component includes three subcomponents, which are described in further detail below:

Subcomponent 2.1 Capacity Building - Policy and Institutional Strengthening (US\$ 1.540 million)

The subcomponent aims at improving skills and knowledge at the national and local level needed in policy formulation, planning and financing in water, sanitation and wastewater management. The specific activities to be performed under this subcomponent are:

- Strengthening the policy and institutional frameworks for wastewater management in the Wider Caribbean Region and engendering local and national reforms;
- Enhancing Implementation of the LBS Protocol;
- Training on the use of Environmental and Natural Resource Accounting (ENRA) in Wastewater Management.

⁹ See Annex F for details in co-financing identification

- Implementing the ENRA at two demonstration sites;
- Enhancing the financial management capacity of wastewater management utilities and service providers;
- Building Capacity for Public-Private Partnerships (PPP) and Bottom-Up Planning within the Wastewater Sector;
- Initiation of Regional Monitoring, Evaluation and Reporting (ME&R) Framework for Wastewater Management; and
- Development of Training Programmes for Wastewater Professionals.

Subcomponent 2.2 Legislative Reform. (US\$0.660 million)

This subcomponent seeks to develop tools that can be used over the long term by WCR countries to improve and strengthen the legislative framework for wastewater management. It is expected that this will eventually lead to an increase in the number of countries ratifying and implementing the LBS Protocol. This subcomponent comprises three activities:

- Review existing legislative frameworks for wastewater management in the WCR countries and develop regional toolkit of templates for improving wastewater management legislation
- Improving compliance with obligations of the LBS Protocol and its Annex III on wastewater management
- Regional training on enforcement of wastewater legislation

Subcomponent 2.3 Awareness Raising (US\$ 0.300 million)

This subcomponent focuses on developing systemic education and awareness programmes about wastewater and sanitation within WCR countries targeting local and national decision makers, the media, teachers and students in the formal education system, community members and the general public. The subcomponent will use best practices from other countries, internationally and within the region to increase the effectiveness and sustainability of the interventions. Overall, the subcomponent will support improved municipal wastewater management within the Wider Caribbean Region. This subcomponent contains three activities:

- Development and dissemination of outreach materials targeted for decision makers and the media on wastewater management
- Design of guidelines for incorporating wastewater management into formal educational curriculum
- Development of community programmes for enhancing public awareness on the importance of wastewater management.

Component 3 – Communications, Outreach and Information Exchange. (US\$ 0.710 million)-UNEP

This component will finance activities related to the dissemination of information related to the CReW to counterpart agencies, implementing partners, related programs (e.g., in integrated water resources management), and relevant Caribbean stakeholders including the private sector. The component will also share the project information and results through the GEF International Waters Learning Exchange and Resource Network. This component supports IW LEARN activities, such as¹⁰: (i) set up and run a project website consistent with the IW-LEARN guidance

¹⁰ Around 1% of the total project budget will support IW LEARN activities. These budget allocations are distributed among the different components (Components 3 and 5), with the majority of the cost allocated to Component 3.

and tool kit, (ii) participation in IW LEARN activities (IWC's and relevant regional conferences); and (iii) production of at least 2 project experience notes. Component 3 has 3 subcomponents:

Subcomponent 3.1 Project Documentation Development & Training (US\$ 0.300 million)

The following activities will be performed under this task:

- Using established templates, technical reports, quarterly newsletters, *IW-LEARN experience notes*, case studies and articles will be prepared for the PFM's and the demos in component 2 (sites using ENRA). The use of templates will ensure that the project is consistently documented within a uniform documentation regime to facilitate effective sharing of this information and lessons learned from the project.
- In addition, as part of this activity a strategy for promoting future replication of the pilots and demos will be developed.
- The documentation prepared under this subcomponent (lessons learned, experience notes, etc.) will be used as a starting points for discussion and sharing information within the region and will enable regional leaders to enter into dialogue based on common ground. The following activities will be performed: (i) Regional meetings will be held with political and technical leaders and other stakeholders to discuss ratification of the LBS protocol, wastewater management in the WCR and the lessons learned through the CReW. As part of the regional dialogue, smaller groups will be created to connect those Countries that have expertise in a specific area with countries that are currently trying to develop that expertise; (ii) Identification of twinning opportunities that can be implemented through CARIWOP and WOP; (iii) Presentations at regional conferences, such as CWWA, to share information about the CReW and the lesson learned.

Subcomponent 3.2 Integrated Information System (US\$ 0.410 million)

This subcomponent focuses on using a clearinghouse mechanism and information system, housed by CAR/RCU, to provide information about wastewater management for countries in the WCR. The subcomponent will use the principles developed in the GEF IW:LEARN initiative which facilitates structured learning and information sharing among stakeholders. The clearinghouse mechanism will provide a seamless interface, linking various information sharing websites and networks that currently exist, and providing a platform for presenting information relevant to the region that is not yet available online. Stakeholders for this information system will include technical persons within the water and wastewater sector as well as national leaders, policy makers as well as the media and the general public. Examples from international best practice will be used to guide the development of the clearinghouse mechanism.

Component 4 – Monitoring & Evaluation - (US\$ 0.760 million) – IDB/UNEP

This component will finance the monitoring and evaluation activities along with the personnel to manage and coordinate these activities. The activities included under this component are:

- **Monitoring & Evaluation.** This subcomponent will include all monitoring and evaluation of the overall project and the activities of the individual executing agencies, which will meet the standard monitoring and evaluation (M&E) requirements and procedures of GEF, IDB & UNEP, including the *GEF 4 IW Tracking System*, the MTE and TE. Under this subcomponent, proposed indicators will be reviewed, and the methodology for establishing the baseline and reporting arrangements will be determined. All project reports (technical, environment, administrative and financial) will be prepared based on reports submitted by the PMUs and other executing agencies. These actions, in combination with regular meetings of the project Steering Committee that is part of

Component 5, will be part of the continuous project monitoring and evaluation and enable adaptive management changes to be recommended, as appropriate. The PCG will oversee the M&E activities of the whole project and ensure that execution of M&E activities is consistent with the overall plan.

- **Financial Audits** – All financial audits will be performed under this subcomponent.

Component 5 – Project Management - (US\$ 0.957 million) – IDB/UNEP

This component will finance the key project management personnel and associated costs for a governance structure that would be established as the primary coordination mechanism for launching and implementing the CReW. Establishment of an efficient project management/coordination mechanism will be an important factor in minimizing the operational difficulties associated with implementing a regional project.

- **Project Coordination.** This will cover the main project management activities, including the day-to-day supervision by the Project Coordinator and the support of a Budget/Administrative Specialist. It should be noted that even though the Project Coordination Group (PCG) will consist of a team of 4 people, only the Project Coordinator and the support of a Budget/Administrative Specialist will be funded under this component. Project coordination will be elaborated in Part III. In addition, it should be noted that travel, including conferences such as *Biennial International Waters Conferences*.
- **Steering Committee.** This subcomponent will cover costs related to Steering Committee and advisory body meetings.

As noted above, the CReW facility funded under GEF 4 is a pilot program. Depending on the results of this demonstration project, the CReW could be expanded into an even larger facility through additional capitalization under GEF 6, or from other donor resources.

GLOBAL ENVIRONMENT BENEFITS: Discharge of untreated water into the marine environment is a major trans-boundary concern of the countries in the Wider Caribbean Region. Addressing such a major issue from financial, technical and policy perspectives would result in the following global environmental benefits: (i) improved marine and coastal ecosystems functioning as a result of investments and policy/legislative reforms, (ii) improved well-being of people whose livelihoods depend on coastal and marine ecosystems functioning to sustain their productive activities (fisheries, tourism, etc); and (iii) enhanced pollution control in the Caribbean Basin (coastal and marine waters) by leveraging resources for investments in land-based pollution reduction as well as through the removal of technical, institutional, policy, regulatory and financial barriers to such investments. The combined actions of the Project will reduce marine environmental degradation and strengthen long-term, cross-cutting and sustainable protection of strategic and coastal ecosystems such as wetlands, interior estuaries, mangroves, as well as their associated watersheds, drainage basins and near-shore coastal waters that have been declared to be of global importance.

Further, it is expected that the implementation of this project will encourage additional countries to ratify and implement the LBS Protocol, thereby fulfilling their obligations vis-à-vis the Cartagena Convention.

SUSTAINABILITY:

In terms of project development and selection under Component 1, IDB already requires detailed financial, economic, social and technical viability analysis and the same criteria will be applied for the pilots. These points are elaborated further below. Additionally, an exit strategy will be developed to ensure the sustainability of all project components, including securing the needed resources.

Financial sustainability. In order for the PFMs to be created by the CReW to be sustainable, one of the requirements is that all projects financed by each PFM must be financially viable with a dedicated source of income in order to sustainably replenish the PFM. The failure of a project to repay would undermine the credibility and viability of the PFM and ultimately the CReW program and would fail to meet GEF objectives. For this reason, all projects funded under the CReW program will need to demonstrate financial viability on an individual basis as one of the criteria that the PMU managing the PFMs will verify when deciding if a project is eligible for financing. This criterion and others will be included in the Operations Manual developed for each PFM.

Environmental sustainability will be achieved by the project through the promotion of improved and cost-effective sewage collection networks and environmentally sound wastewater treatment, disposal methods and increased awareness about the importance of wastewater management in the WCR. The project will contribute to the reduction of pollution of water bodies by untreated domestic wastewater, particularly in sensitive coastal marine ecosystems across the WCR and reducing both negative impacts on such fragile ecosystems and on human health from water-related diseases. Environmental sustainability would also be achieved through the replication of successful experiences of the pilot and demonstration projects and through the dissemination of information on coastal and marine environmental issues, and the environmental benefits at the national and local levels in the beneficiary countries to other countries of the Wider Caribbean and beyond. Each PFM will develop and implement an Environmental and Social Management System (ESMS) to mitigate any negative environmental and social impact and risks associated with the individual projects.

Institutional sustainability. The creation of a local Pilot Management Unit (PMU) at each pilot executing agency, will strengthen the local capacity for the sustainability of the PFMs. Additionally, the capacity development, exchange of expertise, field trips, knowledge exchange and the development of tools and techniques at local, national and regional levels will ensure hands-on experience in the long-term impact of the action and continued implementation of improved wastewater management measures.

It is expected that the longer term benefits of capacity building will be sustained by having such training courses localized and absorbed in the activities of national/regional universities or local training institutes. Capacity building is resource intensive and may require many more years of international support. By using training of trainer methodologies and developing training manuals, the project will contribute directly to improving local training capacity.

Political sustainability. Structural impact at the local policy level could be expected, due to the strong emphasis on national policies, programmes, and legal and financial frameworks in the project. The project, which seeks to promote the ratification of the LBS Protocol, will introduce multi-stakeholder meetings to ensure broad commitment and participation for sustainable wastewater management.

B. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH NATIONAL AND/OR REGIONAL PRIORITIES/PLANS:

The Countries of the WCR demonstrated their support for efficient and effective domestic wastewater management by ratifying the Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region, also known as the Cartagena Convention (adopted in Cartagena, Colombia on 24 March 1983), and signing the Protocol on Land Based Sources of Marine Pollution (LBS Protocol), which was adopted on October 6, 1999. The UNEP CEP Technical Report No. 33 of 1994, which informed the development of the LBS Protocol, identified sewage as the number one point source of pollution impacting on the marine environment of the Wider Caribbean. Both the Convention and the LBS Protocol set goals to govern domestic sewage discharges into the waters of the Wider Caribbean. Accordingly, Annex III of the LBS Protocol was designed to meet these goals by providing guidelines for the management of discharges of domestic wastewater, establishing wastewater effluent limitations, providing guidelines for management, operations and maintenance of wastewater treatment systems, developing criteria for classification of receiving waters, and providing timetables for countries to implement appropriate wastewater management systems.

Under the auspices of the GPA, UNEP CAR/RCU has developed and implemented regional and national pilot wastewater management projects in response to the needs and priorities of the Contracting Parties of the Cartagena Convention and other Caribbean Environment Programme (CEP) member countries. These included the development of national and local plans for compliance with the requirements of Annex III to the LBS Protocol with regard to domestic wastewater through community based sewage needs assessments in Saint Lucia, Jamaica, Panama, Trinidad and Tobago and Belize. These assessments used the Sewage Needs Assessment Guidance Manual developed and published by UNEP CAR/RCU in 2003. Support has also been provided to the development and implementation of National Programmes of Action (NPAs) for the control of pollution from land based sources and activities in several countries of the Wider Caribbean. These NPAs confirm the need for priority intervention to reduce discharges of untreated wastewater to the coastal and marine environment.

The countries in the region recently publicly recognized the need to strengthen mechanisms for financing projects and activities designed to meet these obligations. During the 12th Intergovernmental Meeting (IGM) on the Action Plan for the CEP, held in Jamaica on December 2, 2006, a specific decision was approved, requesting the Secretariat: *“to continue efforts to develop innovative financial mechanisms such as the Caribbean Revolving Fund for Wastewater Management to assist countries in meeting the obligations of the Cartagena Convention and in particular the Land Based Sources of Marine Pollution Protocol”*.

The high global priority for improving sanitation and wastewater management has been reflected in the Millennium Development Goals (MDGs) and the Johannesburg Plan of Implementation (JPOI). The particular challenges for wastewater management in Caribbean SIDS has been further articulated in the SIDS POA (Barbados 1994) and the Mauritius Strategy of 2005. Most of the major urban centers and rural communities of Caribbean SIDS are located in coastal areas, so in responding to wastewater management needs there must be careful consideration of existing and proposed land use, choice of appropriate technology, reducing negative impacts on human health and the environment, and evaluating insurance risks and the ability of persons to pay for the wastewater treatment services provided.

C. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH [GEF STRATEGIES](#) AND STRATEGIC PROGRAMS:

The project is wholly consistent with the International Waters Focal Area Strategy of GEF-4. It contributes to **Strategic Objective 1** (*SO 1 – To foster international, multi-state cooperation on priority water concerns*). It also contributes to the initiation of actions consistent with its **Strategic Objective 2** (*SO-2 – to play a catalytic role in addressing transboundary water concerns by assisting countries to utilize the full range of technical assistance, economic, financial, regulatory and institutional reforms that are needed*). The proposed project is compiled under **Strategic Program 2** (*reducing nutrient over-enrichment and oxygen depletion from land-based pollution of coastal waters in LMEs consistent with GPA*) through: (1) the design and execution of financial innovative mechanism(s) for supporting stakeholders to establish or expand domestic wastewater management systems based on realistic, cost-effective and environmentally sound measures therefore reducing stress onto coastal and marine environments and improving ecosystems functioning for increased livelihood of participating nations; as well as (2) through supporting national and local policy, legal and institutional reforms to reduce land-based pollution.

D. JUSTIFY THE TYPE OF FINANCING SUPPORT PROVIDED WITH THE GEF RESOURCES.

Within the context of the CReW project, several meetings were conducted by the project team (UNEP and IDB) with stakeholders in the WCR, including policy-makers, partner banks, utilities, project developers, regional environmental and health agencies, and companies that provide products and services related to wastewater treatment. On the basis of these discussions and a thorough analysis of existing market barriers, it was ascertained that the most effective approach to increase investments in wastewater treatment in the Wider Caribbean is through a combination of technical assistance, which is incorporated into all project components, and investment/innovative financing, which forms the foundation of the PFM component. As such both technical assistance and regional dialogue activities, as well as the creation of PFMs, will be implemented with the latter being a grant-type funding that will turn into revolving funds, which will provide concessional financing for wastewater management projects. This type of financing will allow the GEF support to be highly leveraged and sustainable.

E. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES:

This proposed project, which focuses on the implementation of the obligations of the LBS Protocol related to wastewater management and protecting the marine environment from a significant land-based source of pollution, will be coordinated closely with initiatives such as the Global Environment Facility-funded *Integrating Watershed and Coastal Areas Management (GEF-IWCAM)* Project, co-implemented by the United Nations Environment Programme (UNEP) and the United Nations Development Programme (UNDP), and co-executed by the Secretariat of the Cartagena Convention, UNEP Caribbean Regional Coordinating Unit (UNEP-CAR/RCU) and the Caribbean Environmental Health Institute (CEHI). GEF-IWCAM is currently focusing on raising awareness of the importance of integrated management of land-based activities in order to protect the coastal areas from pollution (such as sewage). The CReW initiative will be a logical and complementary next-step to GEF-IWCAM.

The IDB will be implementing the CReW as part of the Water and Sanitation Initiative approved by the IDB Board of Directors on May 2007. With the goal of closing the coverage gap in water and sanitation services in the near future, the Water and Sanitation Initiative offers a new set of tools and flexible financing. The initiative has developed strategic guidelines, specific targets and

special financial products to support solutions tailored to each country's needs. The CReW relates to this initiative as it offers innovative PFMs to support wastewater solutions for the countries of the WCR.

Between 2007 and 2011 the initiative will emphasize four programs: i) the *100 Cities Program*, designed to catalyze investment financing and technical assistance for Latin American and Caribbean cities of more than 50,000 people, giving priority to their poorest communities; ii) the *Water for 3,000 Rural Communities Program*, which will support communities willing to take their own financial, technical and organizational decisions and to run their local water and sanitation systems; iii) the *Efficient and Transparent Utilities Program*, which aims at improving the efficiency of companies that run water and sanitation services and increasing their transparency in order to build trust among their clients and financial agents; and iv) the *Water Defenders Program* which aims at the protection of water sources, and decontamination and treatment of wastewater.

Additionally, the CReW initiative will be complementary to the Global Water Operators Partnership (WOP) Alliance sponsored by the IDB. This Alliance was launched by the UN Settlements Programme (UN-Habitat) and partners in August 2007. The Alliance is designed to strengthen the capacities of public water and sewerage operators, including their abilities to plan long-range capital investments and develop projects. In June 2007, water utility managers from all over the Latin America and Caribbean (LAC) met in Brazil and endorsed formation of the Alliance. They encouraged the Inter-American Association of Water and Sanitation Engineering (AIDIS) to work to make operational and then host a regional WOP mechanism in the LAC region. The presence of CReW as a new source of financing in the region will encourage less efficient utilities to build capacity via a regional WOP mechanism, so as to develop sewerage plans and projects for financing.

The CReW responds to the United Nations Secretary General's Advisory Board on Water and Sanitation (UNSGAB) Hashimoto Action Plan II¹¹ (HAP II) which prioritizes wastewater management activities. UNSGAB is mandated by the United Nations Secretary-General to promote global action on water and sanitation issues. It comprises members who are distinguished in their field and are noted for influencing government policy and actions, working with the private sector, media, and civil society, and in mobilizing awareness. It contributes to carry forward the global water and sanitation agenda and provides individual agencies with a forum for enhancing opinion formation and action development.

This proposed project will also help countries to respond to their obligations under the Cartagena Convention and the LBS protocol. Both of these legal instruments set goals to govern domestic sewage discharges into the waters of the wider Caribbean.

DISCUSS THE VALUE-ADDED OF GEF INVOLVEMENT IN THE PROJECT DEMONSTRATED THROUGH INCREMENTAL REASONING :

BASELINE: The current baseline scenario for the region is not only due to poor practices, but is also a result of the fragility, vulnerability and limited human and financial resources available in WCR countries. As mentioned above, according to the UNEP-GPA's October, 2006 Report on

¹¹ UNSGAB HAP II (February 2010).

the “State of the Marine Environment”, in Latin American and the Caribbean, it is estimated that the percentage of wastewater entering the Sea untreated is as high as 85 percent¹². According to the Pan American Health Organization (2001), 51.5 percent of households in the Caribbean Region lack any sort of sewer connection, while only 17 percent of households are connected to disposal systems that are considered acceptable. Such a situation contributes to at least a half-million cases of illness a year from unsafe drinking water; and for negative impacts on the marine environment, which includes pollution of coastal waters and damage to coastal and marine habitats therefore impacting productive sectors such as tourism and fisheries.

Despite the recognition of the need to address domestic wastewater management issues in the WCR, smaller communities in particular do not have access to affordable financing for wastewater infrastructure improvements. Deployment of technologies for adequate wastewater treatment requires significant capital investment. However, wastewater management needs to be prioritized in the region accompanied by an increase in financial resources both in the public and private sectors and directed to the reduction of coastal pollution in the region. Most water utilities favor drinking water supply projects over wastewater management projects and therefore reserve financial resources on a priority basis for water supply initiatives. Moreover, donor countries and international development agencies have historically favored larger wastewater projects in major urban areas, and have often neglected the wastewater treatment needs of smaller cities, communities and rural areas. Most of these financial institutions, with the possible exception of the International Finance Corporation (IFC) which also deals with the private sector, the European Bank for Reconstruction and Development (EBRD) and the IDB, have experienced difficulties in extending financing to sub-sovereign entities.

In addition to limited financial resources, another critical constraint limiting countries ability to effectively reduce pollution of the Caribbean Sea from land based sources are their weak policy, institutional, legal and regulatory frameworks for managing land-based pollution of coastal and marine waters.

Unless the region can address these issues and find alternative sources of financing, the wastewater treatment needs of secondary cities and smaller towns, villages and communities, will continue to be neglected. The result will be the continued degradation of the region’s marine environment, further damaging its coral reefs, which cover 26,000 km², protect 20 percent of the Caribbean coastline, and represent 11 percent of the world’s corals. The inability to reduce pollution discharges to the Caribbean coastal waters will continue to jeopardize the well being of its inhabitants highly dependent on a healthy coastal and marine environment to reduce the incidence of water borne diseases, provide for their livelihoods (i.e. tourism, fisheries etc.), and reduce the impact of extreme weather related events.

INCREMENTAL REASONING: The proposed project intends, through the removal of financial, technical, policy, legislative and institutional barriers, to advance the fulfillment of countries obligations under the Cartagena Convention and its Protocols, in particular the LBS Protocol. The innovative financial mechanisms in support of wastewater management and its associated capacity building and policy reforms proposed under this project will contribute to reducing land-based pollution discharge from untreated wastewater. The CReW will create additional incentives for water/wastewater utilities to consider wastewater projects on a stand-

¹² GPA State of the Marine Environment Report – October, 2006

alone basis or as part of a larger water/wastewater capital improvement plan. The CReW will act as a facility for all stakeholders concerned with improving water quality in the region, and will work with regional actors to mobilize government, the private sector and public support for sanitation projects.

The CReW will not compete with any international financial institutions, but rather will complement their programs throughout the region. Special attention will be given to coordinating the CReW implementation with new water/wastewater initiatives under consideration by the IDB and other development partners. The proposed initiative will also strengthen the national and regional policy, legal, institutional frameworks and build participating nations capacity to reduce nutrient over enrichment providing multiple benefits and impacts on biodiversity, land degradation and climate change, as well as multiple benefits for other GEF focal areas. The successful participation of nations in the CREW will encourage countries to ratify and effectively implement the LBS Protocol.

F. INDICATE RISKS, INCLUDING CLIMATE CHANGE RISKS, THAT MIGHT PREVENT THE PROJECT OBJECTIVE(S) FROM BEING ACHIEVED AND OUTLINE RISK MANAGEMENT MEASURES:

Identified Risk	Risk Rating	Risk Mitigation Measures
Limited political will of participating governments to push the implementation of the necessary pollution reduction measures at both national and local levels.	Low	<p>The mere existence of the financial mechanism will not compel any government to participate, but it will offer them a highly efficient, highly-leveraged means of dealing with a growing problem that they have pledged to address through their adherence to the Cartagena Convention and in particular the Land Based Sources of Marine Pollution Protocol.</p> <p>Similarly, there are cadres of NGOs and CBOs dedicated to improving the lives of the people in WCR, the involvement of these NGOs and CBOs will be also critical to the success of the Project. Efforts will be made to provide the NGOs with capacity-building assistance and training to undertake sustainable water/wastewater projects. A major focus will be on engaging overall public and community support and also to demonstrate the value of wastewater improvements to human health and economic livelihoods.</p>
Testing a revolving fund mechanism in connection to wastewater management and creating innovative financing mechanisms can represent risks.	Low	Given that the financing mechanisms are being implemented as pilots, the Project will have the advantage of experimenting on small-scale initiatives, thereby limiting the downside exposure for the investment. Each PFM has been designed to fit the needs and characteristics of each country and the capacity of the PEAs. A PMU will be created within each PEA to take care of day to day management of the PFM. The PMU members will be trained and will receive constant support from the PCG and IDB and UNEP staff.

Identified Risk	Risk Rating	Risk Mitigation Measures
Lack of loans repayment can put the PFMs financial sustainability at risk.	Low	In order for the PFMs to be created by the CReW to be sustainable, one of the requirements is that all projects financed by each PFM must be financially viable with a dedicated source of income in order to sustainably replenish the PFM. The failure of a project to repay would undermine the credibility and viability of the PFM and ultimately the CReW program and would fail to meet GEF objectives. For this reason, all projects funded under the CReW program will need to demonstrate financial viability on an individual basis prior to consideration under the PFMs.
The numbers and diversity of participating countries in the project may limit (1) the effective and efficient participation and active involvement of stakeholders, and (2) the development of appropriate regional guidelines that respond to different policy, legal and institutional country frameworks.	Moderate	This risk will be minimized through the use of experienced technical experts, frequent consultation with national focal points, and regional consensus-building opportunities (meetings, seminars).
Domestic wastewater management is not a priority shared by all stakeholders in the region. In fact wastewater treatment is often outranked by water supply and wastewater collection and hence there is a low environmental consciousness as it related to wastewater management. Therefore there is a risk that this will limit consensus-building on regional principles for wastewater management.	Moderate	This risk will be mitigated through the development of activities to assess stakeholders' needs and interests, providing opportunities for stakeholder participation, and promoting broad-based information exchange amongst the stakeholders.
Weak institutional capacity in participating countries.	Low	This risk will be mitigated through the involvement of consultants with expertise in certain core areas, who will work with local stakeholders to encourage "learning-by-doing".
Inputs from the national governments required for the regional and national databases are not provided in a timely manner.	Moderate	This risk will be minimized through the establishment of a close working relationship between the project coordinating unit, national focal points, national stakeholders and execution agencies, along with the development of Memoranda of Understanding (MOUs) outlining expectations.

Identified Risk	Risk Rating	Risk Mitigation Measures
Cultural resistance to accept new wastewater management measures.	Medium	To minimize this risk, all activities will be based on the principles of participation including the implementation of clear and direct communication and participation strategies. Institutional and local community resistance will be mitigated through direct engagement, awareness building and partnership.
Incompatibility of national interests. At the national level, there is a risk that competing political priorities could hinder the implementation and sustainability of the project and national interests could prevail over regional efforts.	Low	The process of renewing and strengthening commitments to the Cartagena Convention and the LBS Protocol for domestic wastewater management will minimize this risk. Also, the endorsement of the CReW at the highest political levels in the participating countries will improve the chances of success.
In some WCR member countries, the legal competencies of wastewater management agencies are not properly defined and/or fall within different sectors and/or institutions, often with conflicting interests. If not addressed properly, this could undermine broad national agreement and obstruct implementation of activities.	Moderate	To reduce these risks, the project includes an institutional capacity-building component and capacity assessment and development activities. The project will build from a common strategic vision for the region, with the direct participation of key institutions and stakeholders.
Lack of government counterpart resources. From the financial point of view, a possible risk is the lack of availability or effective integration of counterpart resources to co-finance various activities.	Moderate	Formal agreements and confirmation of co-financing commitments of the pilot countries prior to the beginning of project activities will limit this risk.
Negative impact of governmental changes in one or more countries. Often a political change at government level leads to changes of technical leadership and discontinuation in an ongoing project or process.	Low	This risk to the extent possible will be minimized through (1) The establishment of project executing agencies for the pilot project countries and (2) finalization of the grant agreement between the project executing agencies and the IDB and incorporation of the creation of the PMU as a condition precedent.
Potential issues arising from inadequate communication between UNEP and the IDB.	Low	Clear and aligned roles, responsibilities, policies, procedures, and effective communication channels are in place.
Hazard and climatic events, especially hurricanes are threats to the project. For example, hurricanes could delay project start up, impact on construction of facilities especially when located in low lying or coastal areas.	Moderate	Construction times and activities will be scheduled to ensure minimum loss and appropriate protective measures will be established

G. EXPLAIN HOW COST-EFFECTIVENESS IS REFLECTED IN THE PROJECT DESIGN:

The project's financing mechanism will be cost-effective first because of the significant leveraging that it will achieve. The CReW's pilot approach will permit comparison, from a cost-effectiveness perspective, with other financing instruments and arrangements. Further, the project intervention will emphasize cost-effectiveness by: (i) capitalizing on the experience derived from other GEF initiatives worldwide; (ii) being in line with the IDB Water and Sanitation Initiative¹³, which aims at extending access to water and sanitation services, protecting water resources, and supporting water decontamination and wastewater treatment by encouraging national and local authorities and other stakeholders in making use of the full range of potential partners, including bilateral and multilateral organizations, the local and international private sector entities, and local and national governments, to develop investment plans, address critical needs and priority reforms, and effectively extend coverage for the protection of water resources, water decontamination and wastewater treatment; (iii) taking advantage of the fact that UNEP through CAR/RCU in Kingston, Jamaica serves as the Secretariat of the Cartagena Convention for the Protection and Development for the Marine Environment for the Wider Caribbean Region, which facilitates specific country-based activities, that at the same time enables a more efficient regional coordination and to support the countries in implementing the LBS protocol; and (iv) promoting long-term shifts in investments and expenditure by private, public and international cooperation stakeholders, in favor of measures that will counteract the emerging trends towards the Caribbean Basin's environmental degradation, and thus prevent further negative impacts that are likely to be more costly to mitigate once they appear.

PART III: INSTITUTIONAL COORDINATION AND SUPPORT**A. INSTITUTIONAL ARRANGEMENT:**

IDB and UNEP as GEF agencies, will be responsible for overall project supervision to ensure consistency with GEF, IDB and UNEP policies and procedures, and will provide guidance on linkages with other IDB, UNEP and GEF-funded projects and activities.

Comprehensive project management will be achieved through a range of coordination, supervisory and advisory bodies, at the regional and national levels including:

At the regional level:

- Inter-Agency Co-ordination Group (IACG)
- Steering Committee (SC)
- Project Coordination Group (PCG)
- CAR/RCU as Executing Agency of regional components (2 and 3)

At the national level:

- Pilot Executing Agencies (PEAs) with their Pilot Management Units (PMUs) for Component 1
- Inter-Ministerial/Agency Committees

B. PROJECT IMPLEMENTATION ARRANGEMENT:

The IACG will be formed between the IDB and UNEP to monitor project implementation, review progress and propose corrective measures as appropriate. It will act as a progress review

¹³ This initiative complements the United Nations Hashimoto Action Plan

(http://www.unsgab.org/Compendium_of_Actions_en.PDS), that promotes accelerated actions for achieving the MDG water and sanitation targets.

mechanism and interaction platform to ensure coordination of national and regional activities. The IACG will have quarterly meetings, of which two will be prior to the Project Steering Committee meetings, or more as appropriate.

Some of the individual and combined responsibilities of the IDB and UNEP under the IACG are:

- IDB will assist the PCG in supporting the activities undertaken by the PEA and the individual PMUs from its Headquarters and its relevant country offices.
- UNEP, through the UNEP Division of GEF Coordination (UNEP/DGEF), will assist the PCG in monitoring the implementation of the activities and providing technical and administrative oversight and support to CAR/RCU as the Executing Agency for component 2.
- IDB and UNEP will assist the PCG in monitoring the implementation of the activities and providing technical and administrative oversight and support to CAR/RCU as the Executing Agency for component 3.
- UNEP and the IDB will jointly retain overall responsibility for review and approval of reports produced in accordance with the schedule of work, and will be held accountable to the GEF Council for (i) delivering global environmental benefits, (ii) ensuring that agreed outcomes are realized, and (iii) assuring the timely delivery and cost-effectiveness of activities. Both agencies will be responsible for clearance and transmission of financial and progress reports on the relevant project components to the GEF.

The Steering Committee (SC) will be formed to provide strategic guidance for the CREW project. The SC will be composed of participating countries' representatives, including the 4 Pilot Coordinators (see below under PMU description) and nominated representatives from the other Caribbean countries who have endorsed the project. Selected regional entities that are representative of the Wider Caribbean Region countries and the sanitation sector such as the Caribbean Water and Wastewater Association (CWWA), the Caribbean Environmental Health Institute (CEHI) and the International Water Association (IWA) will also be invited to participate in the Steering Committee as observers. The SC will endorse annual operation plans and budgets, technical and financial reports, and will assist in providing project oversight. If required, the SC may establish advisory groups for any identified need (i.e. technical advisory group). The IDB and UNEP would co-chair the first meeting. Thereafter, the chair will be undertaken on a rotational basis among participating countries. The PCG will serve as the secretariat of the SC.

The Project Coordination Group (PCG) will be established in order to carry out the day-to-day management of the CREW project. The PCG will coordinate execution of the Project under the oversight of UNEP and IDB, and will be composed of a Project Coordinator, a Technical Specialist, a Communications Specialist and a Financial /Administrative Specialist. The PCG will draw from the combined expertise of the IDB's water sector specialists and UNEP. The PCG will be based in Jamaica.

The PCG will be responsible for:

- Coordinating day-to-day project activities,
- Ensuring project quality assurance and quality control (QA/QC),
- Ensuring the timely execution of the project components and activities,
- Consolidating project reports, including technical, environmental and financial progress,

- Project communications to the public, including website and media,
- Communications/coordination with the IDB and UNEP, Executing Agencies (for the pilots and CAR/RCU) and the GEF.
- Coordination of monitoring and evaluation (M&E) requirements. The PCG will compile and submit periodic reports and supporting documentation to UNEP and IDB in line with the M&E plan (see Subcomponent IV.2 and Appendix 7 of the Project Document) and following both agencies internal requirements as outlined in the agency specific Cooperation Agreement.
- Facilitating the work of the mid-term and terminal evaluation.

The key staff within the PCG will include:

- **The Project Coordinator (PC)** will be responsible for the overall performance of the project and production of the outputs/products, reporting directly to the Inter-agency Coordination Group and the Project Steering Committee. The PC will (i) oversee the preparation of all required reports and other outputs and ensure their timely delivery; (ii) provide day-to-day direction for the PCG, participating entities and individuals, and contractors, (iii) liaise between the PCG and the PEAs and PMUs, and (iii) act as the public liaison of the project. The PC will coordinate all technical activities undertaken at the national level by each of the Pilot Management Unit (PMU -see below), at the regional level by CAR/RCU and project teams/consultants as necessary and appropriate for the implementation of the CREW activities. The PC will support the preparation and dissemination of technical documentation, and will prepare and distribute media releases to appropriate outlets throughout the project area. It is anticipated that the media releases will coincide with the initiation of the project, the completion of various work elements, and the exit phase. PC shall have primary responsibility for ensuring “visibility” of the project within the region, and within the GEF.
- **The Technical Specialist** will be the project technical advisor. In this role, the technical specialist will (i) assist the PC with technical evaluation and documentation and in identifying appropriate specialists to serve as consultants and task teams for the execution of the project components, (ii) review technical and scientific submissions and reports from contractors, the PMUs and CAR/RCU, and (iii) liaise with the PMUs on the development and implementation of the projects in accordance with the provisions of the GEF and IDB policies.
- **The Budget/Administrative Specialist** will assist the PC with contractual and financial management aspects of the project. The Budget/Administrative Specialist will prepare quarterly financial reports and submit periodic requests for funds/payments as may be required according to the M&E plan and the service agreement. The specialist will ensure outputs/products are submitted prior to the issuance of payments/payment vouchers, and provide general project financial oversight. The specialist will maintain records of the project and project activities to facilitate reporting and assisting with the smooth operation of the PCG. The specialist shall maintain the project files, coordinate mailings and dissemination of materials to the Steering Committee, and maintain records of the Steering Committee recommendations with respect to project management.
- **The Communications Specialist (CS)** will assist in promoting and improving public understanding of the CREW project. Specific responsibilities include: (i) improve internal and external communications of the CREW; (ii) assist in the development of comprehensive outreach plans for the Project’s ongoing pilots and demonstrations; (iii)

outreach to the media and web content development; (iv) dissemination in the media of the CREW's best practices; (v) advise the PC on strategic communications for the Project; and (vi) review, edit and/or write communication materials for the PC. The Communication Specialist reports directly to the PC and assists all other staff as required. The Communication Specialist will also support the overall implementation of the regional components of the project (Components 2 and 3) on the use of the GEF IW Tracking tool and GEF IW Learn and assist in coordinating the work of consultants and contractors recruited under these two components.

The Pilot Executing Agencies (PEA) will assume responsibility for the administration of the resources assigned to each PFM under Component 1, and will ensure its successful implementation in each location. More information on the PEAs for each PFM can be found in Annex I. Each of the PEAs will sign a grant agreement with the IDB, and will have the following responsibilities:

- Monitor the implementation of each PFM and ensure its successful implementation
- Create the PMUs and assign the Pilot Coordinator
- Provide institutional support for the PMU
- Sign loan/financing agreements with borrowers
- Approve the operating and financial plans prepared by the PMUs
- Approve the Operations Manual for the PFM

The Pilot Management Units (PMU) will be in charge of (i) managing the PFMs under Component 1 in accordance with the grant agreements between the PEAs and the IDB, and (ii) overseeing the development, implementation, monitoring and evaluation of projects funded under the PFM. Each PMU will include a Pilot Coordinator, and other required personnel. The PMUs will also serve as focal points for the information delivery and transfer amongst IDB, UNEP, country counterparts and other interested stakeholders. The PMUs will be established by and will be the responsibility of the PEAs at each pilot location. One of the PMU staff members will be financed through the project, while the other staff members will be part of the PEAs' co-financing. The PMU will be in charge of:

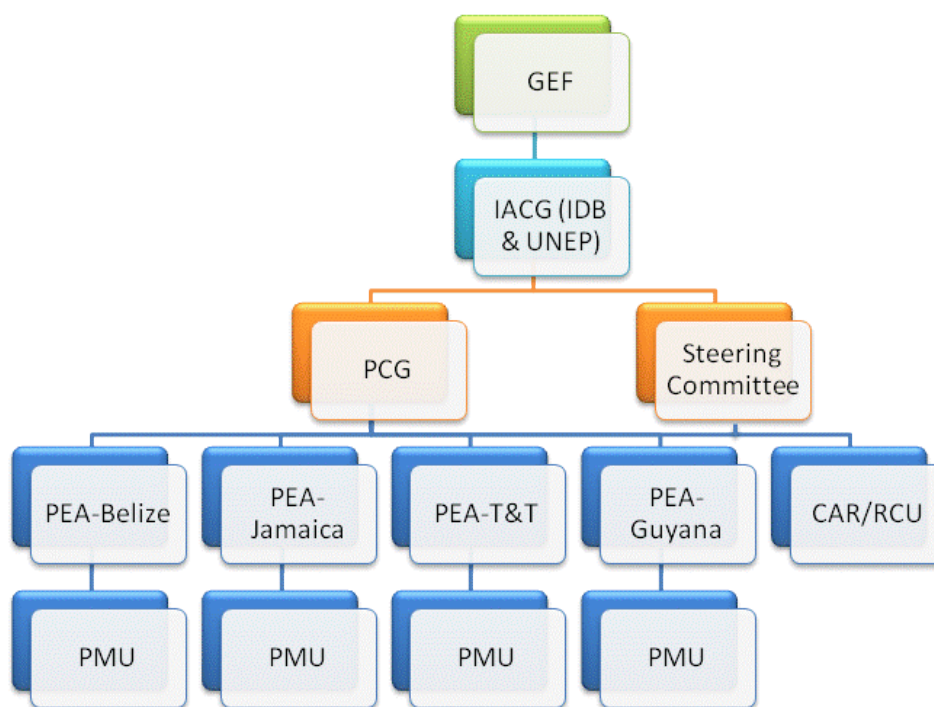
- Preparation of an Operations Manual for the PFM based on the draft manual included in the grant agreement.
- Evaluation of proposals from potential borrowers and approval of projects to be financed by the PFM
- Financial administration of the resources
- Development of operating and financial plans
- Execution of procurement and contracting processes, and administration of all contracts
- Development and implementation of an environmental and social management system
- Development of a monitoring and evaluation system (physical and financial progress) to ensure the achievement of outcomes and outputs established in the results matrix
- Verification of environmental measures application on projects financed by the PFM
- Preparation of financial and progress reports on pilot mechanism
- Monitoring and evaluating the implementation of projects for consistency with the approved components.

CAR/RCU will serve as Executing Agency for the regional Components 2 and 3. In this role, CAR/RCU will be responsible for the following:

- Implementation and management of the activities under Components 2 and 3.
- Financial administration of the resources
- Development of operating and financial plans
- Execution of procurement and administration of all contracted services
- Development of a monitoring and evaluation system (physical and financial progress) to ensure the achievement of outcomes and outputs established in the results matrix.
- Preparation of financial and progress reports on the activities performed
- Day-to-day coordination of the project implementation for the relevant components.

The CReW will rely on, where present and functioning, existing **National Inter-Ministerial or Inter-Agency Coordination Mechanisms** to achieve intra-governmental co-ordination and involvement of relevant stakeholders in wastewater management. With the support of the SC, and through the government-designated focal points, communication links will be established between the PEAs and CAR/RCU with Inter-Ministerial Representatives in the CReW countries to ensure improved coordination and awareness of project activities with national actions. It is expected that the Inter-Ministerial Coordination Mechanism will also be used as a mechanism to establish regional dialogue with the various countries.

Figure 3: Implementation Arrangement structure*



*This arrangement is subject to adjustment during the inception phase.

PART IV: EXPLAIN THE ALIGNMENT OF PROJECT DESIGN WITH THE ORIGINAL PIF:


The proposed project is consistent with the original PIF approved by the GEF CEO and the Council. The project objective and overall activities remain unchanged.

Some differences to highlight, which deepen the design of the project, but are in alignment with the original PIF are:

- At the time the PIF was submitted, 9 countries had endorsed the project. That number has increased to 13.
- The PIF only had a general description of PFMs that were contemplated. The design of the PFMs has evolved with locations already selected for the four PFMs and the identification of the first round wastewater management projects to be financed with those funds. Currently there are definitive commitments from the Pilot Executing Agencies to participate.
- At the time of submission of the PIF, it was envisioned that the monitoring and evaluation was to be part of component 4. A fifth component was developed for monitoring and evaluation in response to the complexity of this project, which includes 5 executing agencies.

PART V: AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for CEO Endorsement.

Agency Coordinator, Agency name	Signature	Date	Project Contact Person	Telephone	Email Address
Maryam Niamir-Fuller Director, Division of GEF Coordination UNEP maryam.niamir-fuller@unep.org		July 28, 2010	Isabelle Vander Beck	+1-202-974-1314	isabelle.vanderbeck@unep.org

ANNEX A: PROJECT RESULTS FRAMEWORK

Objective / Outcome	Indicator	Baseline	Target	Sources of verification	Risks and assumptions
Project Objective: In the context of the Cartagena Convention and its LBS Protocol, to pilot financing mechanisms and their related wastewater management reforms that can be subsequently established as feasible instruments to provide sustainable financing for the implementation of environmentally sound and cost-effective wastewater management measures.	PFMs developed, tested and documented; Policy, institutional and regulatory barriers to financing wastewater investments addressed through national reforms;	No innovative funding mechanisms for wastewater management in the Wider Caribbean Region; Limited wastewater management reforms;	4 PFMs developed, tested and documented in 4 locations; (Belize, Jamaica, Guyana, Trinidad & Tobago (T&T)) At least 5 of the WCR countries adopt wastewater management reforms.	PMUs Reports Mid Term and Final Evaluation Reports	Countries remain supportive of the need for reforms in wastewater management.

Outcome	Indicator	Baseline	Target	Sources of verification	Risks and Assumptions
Outcome 1: Improved access to financing for wastewater management	Number of PFMs implemented.	0	4 PFMs <ul style="list-style-type: none"> National Revolving Fund (Belize) Credit Enhancement Guarantee Facility (Jamaica) National Revolving Fund (Guyana) National Revolving Fund (T&T) 	PMU Reports Mid Term and Terminal Evaluation Reports	
	Disburse \$13 M to first generation projects through PFMs	\$0 M	Belize - \$5M Jamaica - \$3M Guyana - \$3M T&T - \$2M	PMU Reports Mid Term and Terminal Evaluation Reports	

Outcome	Indicator	Baseline	Target	Sources of verification	Risks and Assumptions
Outcome 2: Successful development of first generation projects.	Number of wastewater treatment facilities constructed or rehabilitated through the implementation of first generation projects.	0	Belize - 1 Jamaica - 11 Guyana – 2 T&T- TBD	PMU Reports Mid Term and Terminal Evaluation Reports	
Outcome 3: Improvements in technical capacity for project implementation	PMUs are capable of fully managing all of the elements of the PFM.	0	4 self-sufficient PMUs with the ability to manage the financial, procurement, project management, technical and environmental component of the PFM and projects.	PCG Report Mid-term report Project completion report	
Outcome 4: Reduced land based pollution to terrestrial and coastal waters from untreated wastewater	Volume: total annual volume (m ³) of wastewater treated compared to baseline volume (prior to project)	Belize - 0 m ³ Jamaica - TBD Guyana – TBD T&T- TBD	Belize ¹⁴ - 600,000 m ³ Jamaica ¹⁵ – 19.7 million m ³ Guyana – TBD T&T - TBD	PMU Reports Mid Term Report Project Completion Reports	Governments ratify LBS Protocol and establish standards to comply with regional effluent requirements

¹⁴ Based on a projected 0.43 MGD in 2006 as part of the Engineers without Borders Report.

¹⁵ Based on a total capacity of the 11 plants of 11.9 mgd.

Outcome	Indicator	Baseline	Target	Sources of verification	Risks and Assumptions
	Quality of treated effluents: Improvements in the effluent quality indicators (biological oxygen demand (BOD) levels, nutrient levels, faecal coliforms, and suspended solids) at exit of discharge compared to baseline values	Typical domestic untreated wastewater quality: BOD ₅ – 190 mg/L TSS – 225 mg/L pH - Varies Faecal Coliform – 100 to 1000 mpn/100 mL: : ¹⁶	LBS Protocol ¹⁷ domestic wastewater effluent limits for the appropriate class of water, where appropriate. <u>Class 1 Waters:</u> BOD ₅ – 30 mg/L TSS – 30 mg/L pH – 5-10 Faecal Coliform – 200 mpn/100 ml <u>Class 2 Waters:</u> BOD ₅ – 150 mg/L TSS – 150 mg/L pH – 5-10 Faecal Coliform – n/a	PMU Reports Mid Term Report Project Completion Reports	
	Increase in population with access to improved wastewater treatment facilities	Population with access to wastewater treatment: Belize - 0 Jamaica - TBD Guyana - 0 T&T - TBD	Population with improved access to wastewater treatment: Belize – 6,400 Jamaica - TBD Guyana – TBD T&T - TBD	PMU Reports Mid Term Report Project Completion Reports	
Outcome 5: Improved local and national capacity for wastewater management resulting in reduced land-based pollution of terrestrial and coastal waters in the WCR.	Number of countries that have ratified the LBS Protocol and implementing it accordingly	6 countries ratified and 3 countries implementing	3 additional countries ratify LBS Protocol and 3 additional countries have plans to further implement LBS Protocol	Secretariat to Cartagena Convention reports	Governments comply with regional effluent requirements

¹⁶ Final baseline to be determined for each project in the first year.

¹⁷ Final target for each project to be determined based on local standards, LBS protocol and other environmental factors.

Outcome	Indicator	Baseline	Target	Sources of verification	Risks and Assumptions
	Number. of countries introducing new / revised policies, legislation or other regulatory frameworks on wastewater management including plans and strategies for effective enforcement of wastewater regulations	To be established	At least 75% of countries that endorsed the CReW have revised current policies, laws etc	CAR/RCU and PCG Reports	
Outcome 6: Improved stakeholder awareness about acceptable, sustainable and cost-effective wastewater management solutions.	Increased awareness about wastewater management by: (i) policy makers (ii) wastewater managers (iii) National & regional institutions (iv) wastewater professionals (v) Selected Communities (vi) General public	To be established	>75% of surveyed show increased awareness	Survey data	Broad stakeholder interest Active engagement in the process
Outcome 7: Increased demands for piloting FMs in the WCR.	Requests for replication of PFMs in WCR.	0	3 requests for establishing PFMs besides the 4 PFMs planned as part of Component 1.	CAR/RCU and PCG Reports	Willingness of countries to adopt approach and to replicate Broad stakeholder interest and engagement in the process remains active
Outcome 8: Increased knowledge, dissemination of information and the use of participatory methods and practices by government agencies, private sector and civil society on wastewater management in the WCR.	Increased dialogue and sharing of data knowledge and skills by government personnel with responsibility for wastewater management	Limited dialogue and sharing of information on wastewater management	> 75% of surveyed indicate increased knowledge and skills	Survey results,	Broad stakeholder interest and engagement in the process remains active
	Compiled knowledge and experience about the project shared with other GEF projects and GEF Sec	0	At least one case study or documentation of each pilot and demonstration performed as part of CReW	Pilot project case studies;	

Outcome	Indicator	Baseline	Target	Sources of verification	Risks and Assumptions
Outcome 9: Effective Project Monitoring and Oversight	Timely submission of M&E reports by the executing agencies	N/A	75% of reports from executing agencies are submitted on-time.	PCG Report	
	Implementation of suggested modifications to the project based on M&E reporting to address the changing needs of the executing agencies.	N/A	Effective response to unforeseen changes in circumstances through approved adaptive management procedures	PCG Report, Project reports Mid-term report and Project Completion Report.	PMUs with support from PCG establish and operate revised indicators to monitor project performance
Outcome 10: Effective Project Coordination	Formation of PCG, PMUs and IACG Establishment of formal communication channels and project management tools	N.A.	Project is successfully executed and results realized and disseminated	Minutes of meetings Mid-term and Terminal evaluation	Successful recruitment PCG members

Outputs	Indicator	Baseline	Target	Sources of verification	Risks and assumptions
Subcomponent I.1 – Financial Mechanisms					
(SC I.1.1) Innovative financing mechanisms established and functioning	Grant agreements with local counterparts executed.	0	4 executed grant agreements with PEAs <ul style="list-style-type: none"> National Revolving Fund (Belize) Credit Enhancement Guarantee Facility (Jamaica) National Revolving Fund (Guyana) National Revolving Fund (T&T) 	PMU and PCG Reports, Grant Agreements	

Outputs	Indicator	Baseline	Target	Sources of verification	Risks and assumptions
	PMU at PEAs established at execution of the grant agreement.	0	4 PMUs established <ul style="list-style-type: none"> National Revolving Fund (Belize) Credit Enhancement Guarantee Facility (Jamaica) National Revolving Fund (Guyana) National Revolving Fund (T&T) 		
	On-lending documentation completed and executed.	0	4		
(SC I.1.2) Projects are generating repayments into the local revolving financing mechanism.	Projects are scheduled to generate repayment into the local revolving financial mechanism.	0	<ul style="list-style-type: none"> Belize: repayment into the revolving fund starting in year 6 from project initiation Jamaica: Guarantee facility will be reutilized for second round of commercial financing in year 7 from project initiation Guyana: repayment into the revolving fund starting in year 2 from project initiation T&T: TBD 	PMU and PCG Reports	
Subcomponent I.2 – Project Development Support					
(SC I.2.1) First generation projects prepared and developed sustainably	Number of pilot projects that have 100% design documents at the end of year 2.	0	Belize - 1 Jamaica - 3 Guyana - 2 T&T - TBD	PMU and PCG Reports	

Outputs	Indicator	Baseline	Target	Sources of verification	Risks and assumptions
	Number of pilot projects that have 100% design documents at the end of year 4.	0	Belize - 1 Jamaica - 11 Guyana - 2 T&T - TBD		
Subcomponent I.3 – Capacity Strengthening for Wastewater Pilots					
(SC I.3.1) Effective management and development of the pilots through capacity building.	PMU Staff hired by the execution of the grant agreement.	0	Belize - 1 Jamaica - 1 Guyana – 1 T&T - 1	PCG Report	
	Technical specialist recruited	0	One technical specialist hired prior to the execution of the pilots.	PCG Report	
	PMU staff trained	0	Conduct training with the PMU staff on the following topics: <ul style="list-style-type: none"> • Project Management • Financial Management • Procurement • Environmental & Social Safeguards 	PMU & PCG Report	
(SC I.3.2) Successful implementation of the first generation projects.	Number of projects in construction by the end of year 2.	0	Belize - 1 Jamaica - 3 Guyana – 1 T&T - TBD	PMU Report	
	Number of projects fully implemented at the end of year 4.	0	Belize - 1 Jamaica - 11 Guyana – 2 T&T - TBD	PMU Report	

Outputs	Indicator	Baseline	Target	Sources of verification	Risks and assumptions
Subcomponent II.1 – Capacity Building – Policy and Institutional Strengthening					
(SC II.1.1) Documented policy & institutional reforms for wastewater management at national and local levels	No. of policy reforms introduced	No. frameworks or templates for policy reforms available	>50% of countries endorsing CReW introduce at least 1 policy reform	CAR/RCU and /PCG reports Survey reports	Duration of project too short to introduce policy/institutional reforms
	No. of institutional reforms introduced.	No. frameworks or templates for policy reforms available	>50% of countries endorsing CReW introduce at least 1 institutional reform		Duration of project too short to introduce policy/institutional reforms
	No. of countries adopting templates	No. frameworks or templates for policy reforms available	>50% of countries endorsing CReW adopt templates		
	No. of policymakers aware of templates & tools	No. frameworks or templates for policy reforms available	Policymakers in >75% of countries endorsing CReW are aware of tools & templates		Limited acceptance of templates and tools developed
(SC II.1.2) Country reports demonstrate improved implementation of the LBS Protocol, and in particular its Annex III on domestic wastewater	No. of countries with amended or new national development plans (e.g. housing, industry, tourism) that integrate wastewater management	Approx. 10% of countries endorsing the CReW have national development plans that include wastewater issues.	At least 50% of countries endorsing CReW include wastewater related issues in National development plans.	National Reports CAR/RCU and PCG Reports	Lack of acceptance of need to amend policies in sectors Lack of resources for policy amendments Political willingness absent
	Number of national sanitation policies in place	Approx. 10% of countries endorsing the CReW have national development plans that include wastewater issues.	> 50% of countries endorsing CReW have introduced at least 1 new sanitation policy.		Lack of inter-sectoral co-ordination

Outputs	Indicator	Baseline	Target	Sources of verification	Risks and assumptions
(SC II.1.3) Preliminary accounts for coastal resources and water for 2 demo sites using Environmental and Natural Resources Accounting (ENRA) in wastewater management	Satisfaction levels of stakeholders on ENRA outputs	Low number of countries applying environmental economics and ENRA in wastewater policy formulation	Survey data indicating >75% satisfaction of ENRA outputs in demo sites	Survey data	ENRA methodology not accepted or usable in WCR Stakeholders fail to understand the results
	No. countries adopting ENRA approach		>50% countries express willingness to accept approach	CAR/RCU and PCG reports	Institutions do not accept ENRA methods
	No. of staff trained in ENRA approach		50 staff in 2 demo sites trained in ENRA approach		
(SC II.1.4) Documented improvements in financial capacity of wastewater management utilities and service providers	No. wastewater utilities utilising business plan templates/ cost recovery strategies proposed	N/A	> 50% of utilities across WCR utilising approaches	Survey data CAR/RCU and PCG reports	Acceptance of methodology by wastewater utilities Approach fails to deliver improvements in costs etc.
	No. wastewater utilities demonstrated improvements in cost recovery etc.	N/A	> 25% of utilities in participating countries with demonstrable improvements	CAR/RCU and PCG reports	Willingness of wastewater managers to train staff in approach
	No. of operators trained in methods to increase the level of funding for wastewater projects from state budgets or international lending institutions	N/A	>30 wastewater management staff trained	CAR/RCU and PCG reports	
(SC II.1.5) Guidelines and best practice modalities for civil society involvement in wastewater management	Level of involvement & acceptance of civil society in wastewater governance	N/A	>30% countries have increased civil society involvement in wastewater management	Survey data CAR/RCU and/PCG reports	Wastewater operators / authorities do not accept public involvement in wastewater management
	No. countries adopting involvement of civil society in wastewater management	N/A	50 participants attend 2 regional seminars		Mechanisms for involvement of public sustained;

Outputs	Indicator	Baseline	Target	Sources of verification	Risks and assumptions
(SC II.1.6) Detailed implementation plan (resources, budget & timetable) for a Monitoring, Evaluation and Reporting (ME&R) system	No. countries committed to participating in regional ME&R mechanism and providing data	No regional ME&R system for data collection on wastewater discharged to the marine environment	>30% of counties supply data within 3 years	Survey data CAR/RCU and PCG reports	Acceptance by countries / operators of ME&R system
	No. development / donor partners endorsing ME&R approach	No regional ME&R system for data collection on wastewater discharged to the marine environment	At least 2 development / donor partners in WCR endorse ME&R	CAR/RCU and PCG reports	Acceptance of data provided by development/donor partners
(SC II.1.7) Institutionalized training programmes for wastewater professionals	No. of national & regional institutions providing training programs for wastewater professionals	N/A	4 national institutions providing courses based on material developed and at least 2 regional institutions from the WCR providing wastewater management courses based on material developed	Survey data CAR/RCU and PCG reports Course Curriculum published	Acceptance of partnerships by national / regional institutions Approval of material by national / regional institutions Approval of material by wastewater managers and professionals
	Number of course outlines developed	N/A	At least 3 course outlines developed as per training needs assessment	CAR/RCU and PCG reports Course Curriculum published	Budget for continued training of staff insufficient
	Satisfaction of participants on courses	N/A	>75% of countries in the WCR sending participants to training courses	CAR/RCU and PCG reports	
Subcomponent II.2 – Capacity Building – Legislative Reform					
(SC II.2.1) Regional toolkit of templates for wastewater management drafting instructions	National effluent standards developed based on regional guidelines under LBS Protocol	N/A	At least 50% increase in number of countries that develop national effluent standards	Survey data CAR/RCU and PCG reports	Governments ratify LBS Protocol and establish standards to comply with regional effluent requirements
	No. of stakeholders satisfied with toolkit of templates for wastewater management drafting instructions	N/A	75% of stakeholders express satisfaction in survey		Stakeholders do not accept need for templates on management

Outputs	Indicator	Baseline	Target	Sources of verification	Risks and assumptions
	No. of countries indicate willingness to use templates	N/A	> 50% of countries that endorsed the CReW agree to use templates		
	No. of policy makers aware of templates	N/A	75% of policy makers indicate familiarity in survey on templates		
(SC II.2.2) Training workshops for WCR enforcement personnel	No. of training workshops provided for enforcement personnel	N/A	2: 1 in English and 1 in Spanish	Survey data CAR/RCU and PCG report	Manuals accepted by legal experts / policy makers Participants willing to attend training workshops
	Training workshop satisfaction index		At least 'high' level approval obtained in post workshop survey		
	No. of legal experts / policy makers trained		>30 experts attend in 2 regional workshops		
Subcomponent II.3 – Capacity Building – Awareness Raising					
(SC II.3.1) Increased focus on wastewater management issues by national leadership from improved awareness of wastewater issues	Percentage of government leaders declaring level of knowledge of wastewater issues is “high”		Increase by 20% of government decision-makers with increased awareness	CAR/RCU and PCG reports Survey reports	Lack of interest in topic or surveys
	Percentage of budget allocated to wastewater management		Increase in available national budget of 10% in at least 6 countries	CAR/RCU and PCG reports National budget data	Failure to secure increase in national budget
(SC II.3.2) Increased coverage of wastewater and sanitation issues in the media from improved awareness of wastewater issues	Number of stories in newspapers and on radio and television that include wastewater-related issues		Increase in number of stories by 50% of current level At least two national press briefings held per annum in each demo site and one in each participating country	Survey data CAR/RCU and PCG reports	Media interest Public interest

Outputs	Indicator	Baseline	Target	Sources of verification	Risks and assumptions
(SC II.3.3) Increased awareness of wastewater and sanitation issues in selected communities	Percentage of community members who say their knowledge level is “high”		Increase by 50% of surveyed persons	Survey data CAR/RCU and PCG reports	Presentation of information sufficient to engage communities
(SC II.3.4) Increased teaching of wastewater and sanitation issues in schools	Number of subjects that include wastewater issues	Typically science and social studies may include wastewater issues	Inclusion of wastewater issues in core subjects - language and math and 3 other subjects in at least 6 countries	Survey data PMU/PCG reports	Teachers/Schools interest in wastewater material Curriculum designers approve material developed by CReW for inclusion
	Number of schools that include wastewater issues in their classes.	Typically science and social studies may include wastewater issues	At least 20 schools in participating countries include wastewater material in courses	Survey data PMU/PCG reports	
(SC II.3.5) Increased participation of community members and other members of the public in process to develop and implement wastewater policy and practices through availability and use of guidelines on public involvement	Mechanisms established to facilitate public involvement in decision making processes		Mechanisms for public involvement established in > 50% of participating countries	Survey reports CAR/RCU and PCU reports	Willingness of communities to be involved Willingness of wastewater operators / policy makers to involve public

Outputs	Indicator	Baseline	Target	Sources of verification	Risks and assumptions
Subcomponent III.1 – Project Documentation Development and Training					
(SC III.1.1) PFMs, demos and overall project activities, documented through lessons learned, experience notes, and feature articles, that highlight the potential for replication of the CReW project	Development of templates used to document the pilots, demos and overall project by the end of year 1.	0	Templates for the following: <ul style="list-style-type: none"> • Experience notes • Case studies • Documentaries • Feature articles 	CAR/RCU and PCG reports	Countries do not deliver documents Lack of willingness
	Number of people trained on how to use templates and selections of lessons learned	0	2 staff trained from each PMU and demo project.	CAR/RCU and PCG reports	
	Number of documents prepared summarizing the project, pilots and demos	0	For each pilot and demo prepared at least two experience notes and case study.	CAR/RCU and PCG reports	
(SC III.1.2) Replication strategy	Development of a replication strategy for the PFMs	0	Development of 1 overall strategy with specific components to address the unique features of each PFM.	CAR/RCU and PCG reports	
(SC III.1.3) Increased dialogue with regional wastewater stakeholders through a series of stakeholder consultations.	Annual regional meetings with stakeholders.	0	4 annual regional meetings	Meeting minutes	Countries and Agencies unwilling to participate in stakeholder meetings
	Presentations on the implementation of the CReW at regional conferences	0	Presentations made at 4 Annual CWWA Conferences and other relevant conferences.	Conference/meeting agenda	
	Identification of twinning opportunities for implementation through CARIWOP and WOP.	0	4 twinning opportunities identified	Meeting minutes	
Subcomponent III.2 – Integrated Information Management System					

Outputs	Indicator	Baseline	Target	Sources of verification	Risks and assumptions
(SC III.2.1) Increased access to and use of information related to wastewater management through development of a 'Clearing House Mechanism' (CHM) for the WCR	On-line portal on wastewater information available	No website/ CHM	Functional and utilised website / CHM	CAR/RCU and PCG reports	Web site structure and content agreed
	Data sharing agreement between WCR countries	No Agreement	All countries agree to data sharing	CAR/RCU and PCG reports	Countries fail to agree data sharing
	Maintenance protocol developed and agreed to ensure web data current	No protocol	Latest data available on website	CAR/RCU and PCG reports / no negative comments from WCR countries	Failure to agree protocol Failure to maintain data Budget insufficient
	Increasing use of website by wastewater managers	No website	All countries access website.	CAR/RCU and PCG reports / internet data on web access	Users not aware or not interested in website

Outputs	Indicator	Baseline	Target	Sources of verification	Risks and assumptions
Component IV – Monitoring & Evaluation					
(SC IV.1.1) Development of a standardized M&E approach	Report templates developed.	N/A	Templates developed within the first 4 months of the project, with annual updates as required.	PCG Report	
	Terms of Reference templates for M&E activities developed	N/A	Templates developed within the first 6 months of the project	PCG Report	

Outputs	Indicator	Baseline	Target	Sources of verification	Risks and assumptions
Component V – Project Management					
Project Coordination Group (PCG) established	PCG staff hired, and work plan and budget approved by IACG	No PCG	PCG staffed and project executed according to approved work plan and budget with agreed terms of reference PCG follows the requirements of M&E plan and responds to unforeseen changes to circumstances through approved adaptive management procedures	IACG minutes APR/PIR reports Mid-term and terminal evaluations Financial audit reports	PCG staff successfully recruited Support for work plan by SC
Steering Committee (SC), and Inter-Agency Coordination Group (IACG) established	SC meetings IACG meetings	No SC and no IACG	SC and IACG meetings completed according to plan. Adaptive management changes to project recorded	SC and IACG minutes	Representatives of SC participate in meetings
Exit strategy successfully implemented	Exit strategy accepted	N/A	Exit Strategy accepted and executed 6 months before project completion	IACG and SC meeting minutes	Agreement from all stakeholders to continue activities Willingness of countries to adopt approach and to replicate and /or expand

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF)

Comment	Response
GEF Secretariat Review	
Please include at time of Endorsement a detailed description of the Funding mechanisms that will be used by the revolving fund. Especially the used of the GEF Grant for the PDF, needs to be clarified and output indicators for this, needs to be elaborated upon, as well as how the PDF is to be managed and how the Funds will be revolving.	Annex I is dedicated to the Pilot Financing Mechanisms (PFM). It includes details on how each PFMs will be managed, how the funds will revolve, as well as information and status of the first generation projects to be financed by these PFMs. This annex also includes a section on the PDF (now called PDS to avoid confusion with acronyms formerly used by GEF). Indicators for the PFM and the PDS have been included in the Results Matrix in Annex A.
It will be central for the success of the project, that the document being submitted for CEO Endorsement, describes how the common PCU will be functioning, based etc. and how the common PCU will be managing the funds that will revolve over the course of the project as well as the funds that will revolve after the project is closed. Formulating a sustainability strategy of the CREW and the PCU will be advisable.	Part II B of this document provides a description of the implementation arrangement and details on the PCU (now PCG) and the interaction with the Pilot Executing Agencies (PEAs) and their Project Management Units (PMUs). The PEAs will be the ones responsible for managing the PFMs, and it is there where the sustainability of the CREW is based (see sustainability section under Part II A)
Please include a thorough description in the project document of the technologies that in the PIF is outlined in Annex 4. Further, please make sure to focus the CREW funded activities on technologies such as Constructed wetlands, tertiary treatment, and innovative secondary treatment in both larger interventions as well as on local community scale. Sewerage networks, wastewater collection systems, and primary treatment systems could in specific cases be considered as co-financing, if it will co-finance innovative secondary and tertiary treatment systems.	The technologies that will be used in the CREW projects will be the result of a process of exploring innovative, cost-efficient alternatives that respond to the applicable environmental requirements. As the first generation projects to be financed by the PFMs are under design at the moment and the technologies to be used are not finalized.
Please include and elaborate on the risks associated with testing a revolving fund mechanism in connection to wastewater management, while also including a mitigation strategy for such a potential risk.	This risk and mitigation strategy has been included in Part II G of this document.
STAP Scientific and Technical screening	
STAP welcomes this innovative project that proposes to establish revolving financial mechanism for sustainable financing of wastewater management measures in the Wider Caribbean. Sewage is the most important pollution factor in the area and as such the Project's emphasis on improving wastewater management through a combination of policy reform and innovative financing is scientifically justified. The Project has high replication potential and a strong knowledge sharing component.	Comment noted

Comment	Response
<p>The Project Development Facility (PDF) is a crucial element in ensuring success of the Project through developing a continuous flow of “bankable” projects. It is not clear how the Project’s components 1 and 2 are interlinked, i.e. how policy and technical advice informs investment decision-making at the PDF phase. Without a close coherence between investment decision making, policy reform and best scientific and technological advice, the project runs a risk of supporting ad-hoc interventions without significant impact on environmental status of watersheds and coastal waters. STAP recommends embedding an environmental quality assurance component (at the portfolio level) into the PDF facility to inform investment decisions.</p>	<p>The purpose of the PDF (now called the PDS to avoid confusion with acronyms formerly used by GEF) is to be used for the technical development of the first generation projects to be financed by the PFMs. Component 2 will support policy reform in selected countries where Component 1 pilot locations will have priority. Environmental and safeguard requirements will be included in the grant agreements for the PFMs.</p>
<p>A monitoring and evaluation part of the Component 1 measuring impact is not described in the PIF. It is recommended that the design of the M&E component at the project’s preparation stage applies adaptive management approach (feedback loop). That said, STAP notes the excellent set of indicators developed for the Project.</p>	<p>A M&E system that covers all components of the CREW project, and which applies an adaptive management approach has been developed for the project.</p>
<p>STAP notes that few of the Caribbean countries (4 of 28) have signed the LBS Protocol and supports the implied Project intention (e.g., through the Project indicators) to encourage more countries to sign and adopt the provisions of the Protocol.</p>	<p>Comment noted</p>
French Comments on Work Program – GEF Council November 2008 (GEF C.32/6 REV.1)	
<p>The project preparation should clarify how GEF grants will be used and if they are not used to improve IDB’s discount on soft loans.</p>	<p>Part II A includes a description of how the GEF grant will be used. Further information on the PFMs can be found in Annex I.</p>
<p>The project lacks some proper activity and component to monitor the impacts of improved investments in waste water management on water quality and national biodiversity in particular (coral reef for example). If this activity is not appropriately designed, it will be impossible to demonstrate the impact of the CReW and the verification of its justification. The outcome indicators proposed are reduced BOD levels and coliform concentration (plus several indicators in annex 5), while the justification of the project is on the overall conservation of the natural capital of the Caribbean.</p> <p>For example, the PIF state p5:” <i>Discharge of untreated wastewater has other impacts as well. The CARSEA study found that sewage was one of the main factors that had caused some 80 percent of living coral in the Caribbean to be lost over the past twenty years. Damage by untreated wastewater to the marine environment including living coral can bring about severe economic consequences for people in the Caribbean. The CARSEA study found that “the Caribbean is the region in the world most dependent on tourism for jobs and income,” while “fishing is also a significant source of both income and subsistence.”</i> The monitoring system framework doesn’t provide appropriate tools for monitoring project impact on marine biodiversity and socio-economic status (jobs, etc.). Project preparation need to address this issue.</p>	<p>Given the four year timeframe of the project and the diverse geographical pilot locations, the most effective way to assess the impact of the pilot projects is through direct monitoring of the effluent quality at the improved wastewater treatment facilities. Water quality indicators have been included in the results matrix (Annex A) for wastewater treatment facility effluent.</p>

ANNEX C: CONSULTANTS TO BE HIRED FOR THE PROJECT USING GEF RESOURCES

<i>Position Titles</i>	<i>\$/ person week*</i>	<i>Estimated person weeks**</i>	<i>Tasks to be performed</i>
For Project Management			
International			
Project Coordinator	2,406	212	Overall project management, coordination and reporting. Staff coordination and management
Local			
Budget/Administrative Specialist	1,058	241	Overall project financial management, including budgeting, reporting, contracting and accounting. Preparation of financial reports and ensuring proper execution of project funds
The staff that are supporting the overall project management of the CREW project will be required to travel to the pilot and demo locations along with regional meetings and conferences. It is envisioned that the majority of the travelling will be done by the Project Coordinator and Technical Specialist.			
For Technical Assistance			
Local			
Consultant - Wastewater Management Specialist	1250	24	Activity II.1.1 Element 1: Develop framework template and toolkit for developing/updating wastewater and/or sanitation policies in the WCR, with separate modules according to regional/sub-regional context
Consultant - Wastewater Management Specialist	1250	16	Activity II.1.1 Element 2: Develop framework template and toolkit for developing/updating municipal wastewater management master plans in the WCR, with separate modules according to regional/sub-regional context.
Consultant - Capacity Assessment Expert	1500	13.33	Activity II.1.1 Element 3: Assess national capacity of wastewater management institutions in two (2) pilot countries and prepare national capacity development plans
Consultant - Capacity Assessment Expert	1500	13.33	Activity II.1.1 Element 4: Implement, monitor and report on national capacity development plans in (2) pilot countries
Consultant - International/Regional Policy Expert	2000	12.5	Activity II.1.2 Element 1: Assess progress made towards achievement of regional targets and commitments on domestic wastewater management, as set forth in the LBS Protocol and its Annex III on Wastewater Management.
Consultant - International/Regional Policy Expert	2000	12.5	Activity II.1.2 Element 2: Prepare guidelines/toolkit for policy makers to enable government officials to ensure compliance with national regulations and standards, as well as with the effluent limitations of the LBS Protocol.

<i>Position Titles</i>	<i>\$/ person week*</i>	<i>Estimated person weeks**</i>	<i>Tasks to be performed</i>
Consultant - Environmental Economist/ Accountant	2000	60	Activity II.1.3 Element 1: Development of preliminary accounts for coastal resources and water in two (2) pilot countries in the Wider Caribbean Region
Consultant - Environmental Economist/ Accountant	2000	10	Activity II.1.3 Element 2: Conduct two (2) regional training workshops (1 in English, and 1 in Spanish) for statisticians/ economists/ accountants on mainstreaming wastewater management through ENRA.
Consultant (Management Specialist)	2000	12.5	Activity II.1.4 Element 1: Survey of international and regional best practices in administration and management of wastewater utilities
Consultant (Management Specialist)	2000	17.5	Activity II.1.4 Element 2: Identify appropriate, sustainable cost recovery models for the provision of wastewater collection and treatment services (on different scales) and assess the feasibility of using tax based and non-tax based economic instruments (and applying the “user pays” and “polluter pays” principles) and strategies to improve revenue generation
Consultant – Development Expert	2000	20	Activity II.1.5 Element 1: Comparative reviews of decentralized versus centralized management of wastewater in the Wider Caribbean, highlighting regional and international best practice case studies.
Consultant – Development Expert	2000	10	Activity II.1.5 Element 2: Conduct regional seminar for policymakers on ‘Strengthening Institutional Arrangements for More Effective Delivery of Wastewater Management Services in the Wider Caribbean Region’.
Consultant (M&E Expert)	1500	26.67	Activity II.1.6 Element 1: Feasibility Assessment of a Regional Monitoring, Evaluation and Reporting (MER) Framework to monitor progress of WCR States in achieving the MDG targets for sanitation, UNEP GPA’s Strategic Action Plan on Municipal Wastewater and Annex III requirements of the LBS Protocol
Consultant (M&E Expert)	1500	26.67	Activity II.1.6 Element 2: Baseline data collection in (2) pilot countries and refinement of indicators for the ME&R.
Consultant (M&E Expert)	1500	26.67	Activity II.1.6 Element 3: Develop national ME&R framework/ action plan in two (2) pilot countries to enhance data and information management.

<i>Position Titles</i>	<i>\$/ person week*</i>	<i>Estimated person weeks**</i>	<i>Tasks to be performed</i>
Consultant – Training Specialist	1500	28.89	Activity II.1.7 Element 1: Identify training courses needed for wastewater managers and treatment plant operators, covering priority areas of strategic planning, tariff setting, implementation of new technologies, and operations and maintenance.
Consultant – Training Specialist	1500	31.11	Activity II.1.7 Element 2: Develop partnerships with institutions offering sustained wastewater training in the region (IADB, CDB, PAHO, CWWA, CEHI, CWBMP) to conduct training according to the most appropriate delivery mechanism (in-house, on-line, seminar, workshop, etc).
Consultant – Training Specialist	1500	26.67	Activity II.1.7 Element 3: Develop course outlines for new wastewater management courses according to national and regional priorities.
Consultant (Legal Expert)	1500	13.33	Activity II.2.1 Element 1 - Review and assess legislative frameworks within WCR countries, including limitations and effectiveness of legal instruments currently in use, and existing enforcement capacity
Consultant (Legal Expert)	1500	13.33	Activity II.2.1 Element 2 - Develop recommendations for harmonization of an effective omnibus legislative framework for wastewater management in the region
Consultant (Legal Expert)	2000	75	Activity II.2.1 Element 3 - Demonstration project in two (2) pilot countries for the provision of technical assistance to draft regulations and amendments to mother acts/ordinances and to conduct regulatory impact assessments (RIAs).
Consultant - Technical Specialist	1500	13.33	Activity II.2.2 Element 1 - Review wastewater compliance programs in the region, and collect international and regional best practices in compliance monitoring
Consultant - Technical Specialist	2000	40	Activity II.2.2 Element 2 - Design an electronic reporting system (ERS) for wastewater facilities (issued with discharge licenses)
Consultant - Technical Specialist	2000	25	Activity II.2.2 Element 3 - Testing of ERS in two (2) pilot countries
Consultant - Legal/Enforcement Training Expert	2000	20	Activity II.2.3 Element 1 - Design and Conduct regional training seminars for legal officers, drafters and policy makers
Consultant (Communications and media expert/Facilitator)	1000	15	Activity II.3.1 Element 1 - Conduct workshops, seminars, etc. for decision makers

<i>Position Titles</i>	<i>\$/ person week*</i>	<i>Estimated person weeks**</i>	<i>Tasks to be performed</i>
Consultant (Communications and media expert/Facilitator)	1000	15	Activity II.3.1 Element 2 - Organize press briefings and conferences
Consultant (Technical Assistance - Curriculum review)	1000	12	Activity II.3.2 Element 1 - Inventory existing curricula addressing wastewater and sanitation issues
Consultant (Resource Expert / Educational material writer)	1000	12	Activity II.3.2 Element 2 - Develop new teaching/learning tools
Consultant (Technical Assistance - Curriculum review)	1000	2	Activity II.3.2 Element 3 - Develop guidelines on how to include wastewater management issues in educational curricula
Consultant (Resource Expert / Educational material writer)	1000	3	Activity II.3.2 Element 3 - Develop guidelines on how to include wastewater management issues in educational curricula
Consultant (Media and communications expert)	2000	10	Activity II.3.3 Element 1: Develop regional and national/local community outreach programs to raise awareness on wastewater and sanitation issues, and to increase cultural acceptability of appropriate wastewater technologies and sanitation practices.
Consultant (Writer)	1500	30	Activity III.1.1 Element 1 - Prepare comprehensive documentation of all phases of CReW project, including case studies and lessons learned from pilot projects, as well as templates, best practices and toolkits developed under capacity building component
Consultant (Writer)	1000	15	Activity III.1.2 Element 1 - Standardize format and design toolkit to instruct project implementers on how to prepare documentation that can be shared and replicated by entities in other regions
Consultant (Writer/Facilitator)	1000	10	Activity III.1.2 Element 1 - Standardize format and design toolkit to instruct project implementers on how to prepare documentation that can be shared and replicated by entities in other regions
Consultant (IT Expert)	2000	15	Activity III.2.1 Element 1 - Design and create clearinghouse mechanism
Consultant (IT Expert)	2000	10	Activity III.2.1 Element 2 - Create a maintenance protocol to ensure that the information is kept current
Consultant (IT expert)	2000	2.5	Activity III.2.1 Element 3 - Conduct a promotion campaign to facilitate the wide use and support of the mechanism by countries in the WCR

<i>Position Titles</i>	<i>\$/ person week*</i>	<i>Estimated person weeks**</i>	<i>Tasks to be performed</i>
Consultant (Communications expert)	1500	13.33	Activity III.2.1 Element 3 - Conduct a promotion campaign to facilitate the wide use and support of the mechanism by countries in the WCR
Consultant (IT Expert)	2000	20	Activity III.2.2 Element 1 - <i>Create information system / DSS</i>
Consultant (IT Expert)	2000	7.5	Activity III.2.2 Element 2 - Training in use of information system/DSS
Consultant (Writer)	1000	10	Activity III.3.1 – Regional multi-stakeholder consultation
Consultant (Facilitator)	1000	20	Activity III.3.1 – Regional multi-stakeholder consultation
Communications Specialist	962	218	Project communication to the public, communication between IAs, EAs and PMUs as well as the SC.
International			
Technical Specialist	1,817	226	Technical oversight for pilot projects and verification of timely and proper project execution
Justification for Travel, if any: travel costs are associated to consultancies that require visits to project sites to carry out consultations with project beneficiaries or to compile information and training activities.			

* Provide dollar rate per person week. ** Total person weeks needed to carry out the tasks.

ANNEX D: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS**A. EXPLAIN IF THE PPG OBJECTIVE HAS BEEN ACHIEVED THROUGH THE PPG ACTIVITIES UNDERTAKEN.**

The objective of the PPG has been met. The necessary studies to complete the design of the project have been completed.

B. DESCRIBE FINDINGS THAT MIGHT AFFECT THE PROJECT DESIGN OR ANY CONCERNS ON PROJECT IMPLEMENTATION, IF ANY:

Not applicable

C. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES AND THEIR IMPLEMENTATION STATUS IN THE TABLE BELOW:

Project Preparation Activities Approved	Implementation Status	GEF Amount (US\$)				Co-financing*
		Amount Approved	Amount spent to date	Amount Committed	Uncommitted amount	
Component 1 - IDB						
Design of Financial Mechanism and Project Development Facility Execution Scheme	Final stage	60,000	36,000	24,000	0	75,000
Identification and development of pilot projects in the Wider Caribbean region	Final stage	100,000	60,000	40,000	0	1,000,000
Development of necessary documents for the implementation of the CReW pilot projects (including generic operations manual, loan agreements templates, security pledges)	Final stage	50,000	30,000	20,000	0	
Component 1 TOTAL		210,000	126,000	84,000	0	1,075,000
Component 2 - UNEP						
Technology Capacity Building	Final stage					
Collate documentation on appropriate technology and use in the region		22,500	16,890	5,610	0	50,000
Wastewater needs assessment and subsequent training needs assessment at intervention sites		20,000	14,985	5,015	0	5,000
Awareness raising	Final stage					
Survey of Knowledge Attitude Practices related to wastewater management		10,000	7,500	2,500	0	5,000
Assessment and preliminary identification of the mechanism for information dissemination		10,000	7,500	2,500	0	-
Policy/institutional /legal capacity building	Final stage					
Review of policies and legislation as well as relevant gap analysis in support of wastewater management at interventions sites in support of capacity building needs		30,000	22,500	7,500	0	30,000

<i>Project Preparation Activities Approved</i>	<i>Implementation Status</i>	<i>GEF Amount (US\$)</i>				<i>Co-financing*</i>
		<i>Amount Approved</i>	<i>Amount spent to date</i>	<i>Amount Committed</i>	<i>Uncommitted amount</i>	
Sectoral overview of wastewater management for the region.		20,000	15,000	5,000	0	60,000
Component 2 TOTAL		112,500	84,375	28,125	0	150,000
Component 3 - IDB - UNEP						
Needs assessment and gap analysis for existing clearing house mechanism for wastewater management – formulation of TORs for a clearing house mechanism on waste water management building on IW:LEARN principles - UNEP	Final stage	10,000	7,500	2500	0	5000
Survey for identification of stakeholders at the national and sub national level - IDB	Final stage	10,000	6,000	4,000	0	0
Design and initial implementation of project communication and outreach plan for project preparation and implementation (including regional workshops and publications) - IDB	Final stage	25,000	15,000	10,000	0	0
Component 3 TOTAL		45,000	21,000	14,000	0	5,000
Component 4 – IDB – UNEP **						
Design of Project Execution Arrangement including a detailed project organigram and decision flow chart as well as Terms of Reference for staff in charge for project execution and management.	Final stage	5,000	3625	1375	0	0
Design of the monitoring and evaluation arrangement for the project including a detailed project log frame building on individual components log frames, a framework for IW indicators, an overall incremental cost analysis, and detailed financial breakdown of GEF and non GEF resources.	Final stage	7,500	7500	0		0
Component 4 TOTAL		12,500	11,125	1,375	0	0
Total project preparation financing		380,000	242,500	127,500	0	1,230,000

*IDB co-financing consists of i) US\$150,000 for consulting services already contracted for the preliminary design of the financial mechanism, project development support execution scheme, and the preliminary identification of pilot projects; ii) US\$175,000 for the development of water/wastewater sectoral plans in some of the countries that endorsed the project (Barbados, Belize, Costa Rica, Guatemala, Honduras, Jamaica, Panamá, Suriname and Guyana); and iii) US\$750,000 in non-reimbursable technical cooperation that the IDB approved for the Preparation of a Wastewater Rehabilitation Program in Trinidad and Tobago

ANNEX E: CALENDAR OF EXPECTED REFLOWS

Provide a calendar of expected reflows to the GEF Trust Fund or to your Agency (and/or revolving fund that will be set up)

The figure below shows the expected schedule of activities for each of the pilots, including the **reflows into each of the revolving funds** or reserve account.

PFMs	2011				2012				2013				2014				2015				2016				2017				2018				2019				2020			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Jamaica																																								
Belize																																								
Guyana	Project #1																																							
Trinidad & Tobago																																								

Key

	Revolving Fund or Reserve Account Established		Implementation (Design & Construction)
	Loan Agreement Executed (Commercial Finance Secured for Jamaica)		Loan Repayment
	Procurement		Guarantee for Second Round of Financing (for Jamaica)

ANNEX F: DETAILED INFORMATION ON THE SOURCES OF CO-FINANCING

The following should be noted in the review of the co-financing table:

1. The co-financing is presented in summary by component and corresponds to the information presented in Table A.
2. The co-financing for Component 1 has been divided into co-financing directly related to the Pilot Financing Mechanisms and co-financing within the WCR with the main goal of reducing pollution caused by discharges of untreated wastewater into the Wider Caribbean basin, including IDB loans or grants. These co-financing:
 - (a) expand the *resources* available to finance wastewater treatment activities in the WCR and maximizes the impact of the CReW.
 - (b) are key indicators of the strength of the *commitment* of the countries in the WCR region and the IDB as GEF agency
3. In cases where an IDB operation includes water and wastewater investments, only the amount allocated for wastewater was accounted for.

Country/ Entity	Project #	Project name	Status	Type of co-financing	Total Loan Amount	Amount Allocated for Wastewater	Documentation provided in Annex H
Component 1 - Pilot Financing Mechanisms							
Co-financing from wastewater operations in countries that endorsed the CReW							
Costa Rica	CR-L1024	Water and Sanitation Program	Pipeline	IDB loan	85,000,000	49,823,529	Letter of Interest
				Government grant and in-kind	231,500,000	58,159,827	
Costa Rica	CR-T1034	Water and Sanitation Subnational Program Design	Approved	IDB Grant	1,413,920	693,140	Loan Agreement
				Government grant and in-kind	266,486	109,173	
Guatemala	GU-L1039	Water and Sanitation Program for Human Development-Phase I	Approved	IDB loan	50,000,000	23,700,000	Loan Agreement
	GU-X1005		Approved	IDB Grant	50,000,000	25,000,000	TC Agreement
Guatemala	GU-T1134	Preparation of the Water and Sanitation Program for Human Development	Approved	IDB Grant	1,200,000	600,000	Loan Agreement
				Government grant and in-kind	130,000	-	
Panama	PN-L1042	IDAAN Water and Sanitation Investment Program	Pipeline	IDB loan	40,000,000	11,400,000	IDB Operation Document
				Government grant and in-kind	10,000,000	2,500,000	
Panama	PN-L1053	Panama City and Bay Sanitation Project Supplemental Financing	Approved	IDB loan	30,000,000	29,450,000	IDB Board Resolution of Approval
				Government grant and in-kind	9,180,000	8,080,000	
Panama	PN-T1064	Studies and design of Drinking and Sanitation Systems IDAAN	Approved	IDB Grant	750,000	375,000	TC Agreement
				Government grant and in-kind	50,000	25,000	
Subtotal					509,490,406	209,915,669	
Co-financing directly related to the Pilot Financing Mechanisms							
Belize	BL-L1015	Integrated Water and Sanitation Program	Pipeline	Government loan	5,000,000	4,750,000	IDB Operation Document
Jamaica		K-factor based private sector finance		Government loan		10,000,000	NWC Letter
Guyana	GY-L1025	Georgetown Sanitation Improvement	Pipeline	IDB loan	9,500,000	9,025,000	IDB Operation
Subtotal					14,500,000	23,775,000	
Subtotal for the PFMs and Other Wastewater Operations in WCR						233,690,669	
Co-financing for Project Development Support							
Guyana	GY-T1072	Designs for Improvements in Water and Sanitation Infrastructure	Approved	IDB Grant	650,000	325,000	TC Agreement
				Government grant and in-kind	50,000	-	
Belize		Funding for design services	Pipeline	IDB Grant	500,000	475,000	IDB Co-financing Letter
Jamaica		Design Services		Government grant and in-kind	1,000,000	1,000,000	NWC Letter
USTDA		Technical Assistance for Jamaica and Belize	Approved	Grant	500,000	500,000	USTDA Co-financing Letter
Subtotal					2,700,000	2,300,000	
Total for Component 1						235,990,669	
Component 2 - Capacity Building							
UNEP		UNEP Wastewater Projects and Training in Participating Countries		In-Kind		50,000	CAR/RCU Letter
Barbados	BA-L1015	Water and Sanitation Systems Upgrade	Approved	IDB loan	50,000,000	5,000,000	Loan Agreement
				Government grant and in-kind	3,000,000	-	
Total for Component 2						5,050,000.00	
Component 3 - Communication, Outreach and Information Exchange							
UNEP		Communication Support		In-Kind		50,000	CAR/RCU Letter
Total for Component 3						50,000.00	
Component 4 - Monitoring & Evaluation							
PMUs		M&E Co-financing		Government grant and in-kind		840,000	NWC, GOB, GOG Letters
Total for Component 4						840,000	
Component 5 - Project Management							
IDB		CReW PCG Office & Equipment		In-Kind		692,000	IDB Co-financing Letter
IDB		Hosting SC Meetings (location or video conference)		In-Kind		80,000	IDB Co-financing Letter
Jamaica - NWC		PMU and office expenses		Government grant and in-kind		648,000	NWC Letter
Belize - GOB		PMU and office expenses		Government grant and in-kind		739,200	GOB Letter
Guyana - GOG		PMU and office expenses		Government grant and in-kind		368,000	GOG Letter
UNEP CAR/RCU		PMU and office expenses		in-kind		500,000	CAR/RCU Letter
WCR Countries		Overall Wastewater PM Support to WCR				6,744,534	See IDB loans under Component 1 and 2
Total for Component 5						9,771,734	
TOTAL for						251,702,403	

ANNEX G: ENDORSEMENT LETTERS RECEIVED

ANNEX H: CO-FINANCING CONFIRMATION DOCUMENTS

ANNEX I: DESCRIPTION OF PILOT FINANCING MECHANISMS AND FIRST GENERATION PROJECTS

It should be noted that the technical annex included under this Annex is a draft and will be finalized following GEF submission. The following should be noted when reviewing the report:

1. The GOB will now be able to obtain a loan to co-finance the project. As a result, the option of creating a special purpose company is no longer on the table. The Government of Belize is currently processing a US \$5 million loan with IDB.
2. The PFM in T&T needs to be finalized in discussions with the new government along with details for the first generation project.

ANNEX J: LBS PROTOCOL

ANNEX K: IDB’S INTERNAL DOCUMENT FOR APPROVAL

ANNEX L: UNEP’S INTERNAL DOCUMENT FOR APPROVAL

DRAFT TECHNICAL ANNEX

Caribbean Regional Fund for Wastewater
Management (CReW)

Detailed Description of the Pilot Funds and the
First Generation Projects

Revised August 31September 23October 13, 2010

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1 Introduction

1.1 CReW Project Overview

In September 2008, IDB and UNEP jointly applied for a grant of US\$ 20 million from the Global Environment Facility (GEF) to implement the Wider Caribbean Regional Fund for Wastewater Management (CReW). The Project Identification Form (PIF) was submitted to the Secretary of the GEF on September 25th, 2008 and received the GEF CEO's endorsement on September 26, 2008. A joint request for a Project Preparation Grant (PPG) in the amount of US\$380,000 (US\$ 245,000 for the IDB and US\$ 135,000 for UNEP) was also presented to the GEF and was approved on December 22, 2008.

An initial study (Assessment of Wastewater Management in the Wider Caribbean – RG-T1529) was finalized in May 2009 to (i) review the financial, legal and institutional constraints in the implementation of sustainable wastewater treatment and management initiatives in the Wider Caribbean Region (WCR), (ii) develop lines of action to address those constraints, and (iii) help the IDB with the initial design of a Fund and definition of potential pilots to be financed for wastewater management in the Caribbean Basin. The study recommended the implementation of innovative financing mechanisms to address the existing financial impediments to wastewater projects in the Caribbean.

The corresponding Technical Cooperation for the PPG (RG-X1050) was approved on May 21, 2009 and aims to define detailed implementation structures for the CReW, based on the initial designs for the individual financing mechanisms as identified during the implementation of RG-T1529.

The overall project objective of the CReW program is to pilot financing mechanisms that can be used to provide sustainable financing for environmentally sound and cost-effective wastewater management. The other main objective of the Project is to facilitate policy discussions, regional dialogue, and knowledge exchange regarding wastewater management with the key stakeholders in the wider Caribbean.

The expected outcomes from the CReW Project are:

- i) successful implementation of the Pilot Funds (PFs) and of the first generation of projects under the PFs;
- ii) improved access to and testing of appropriate wastewater management technologies to be measured through the number of wastewater systems implemented as a result of the program;
- iii) reduced land-based pollution to watersheds and coastal waters to be measured through reduction/changes in biological oxygen demand (BOD) levels, nutrient levels and fecal coliforms levels at the pilot sites;
- iv) improved local and national capacity in support of wastewater management and subsequent reduction in land-based pollutions to adjacent watersheds and coastal waters - to be measured through the number of countries ratifying the Land-Based Sources and Activities (LBS) Protocol; the laws/regulations

- adopted at the national level to facilitate compliance with the LBS Protocol; national plans and strategies for effective enforcement of domestic wastewater management regulations developed and enacted, and improved integrated coastal management (ICM) protocols;
- v) improved stakeholder awareness on the definition of environmentally acceptable, sustainable and cost-effective wastewater management solutions, to be measured through the number of countries who have ratified and implemented the LBS Protocol;
 - vi) continuation of multi-agency partnerships catalyzing the replication of technologies use, reform implementation and innovative financing, to be measured through amount and degree of inter-agency dialogue and data sharing, level of knowledge and skills of government personnel with responsibility for wastewater management.

The purpose of this report is to summarize the various financing mechanisms that have been proposed for the various pilot locations and the first generation projects that have been identified to be implemented based on financing through the financing mechanism.

1.2 Financing Mechanisms and First Generation Projects

1.2.1 Overview

The four financing mechanisms and their respective first generation projects that have been identified are summarized below:

1. **Credit Enhancement Facility in Jamaica – US \$3 million:** Credit enhancement support for local commercial bank financing of wastewater projects in Jamaica. CReW funds will be placed in a reserve account and pledged to local lenders as collateral for the financing of US\$ 15 million in initial wastewater projects. Total financing is expected to grow to over US\$ 300 million. The first projects to be implemented from this guarantee are 11 projects involving either the rehabilitation of an existing wastewater facility or the construction of a new wastewater facility.
2. **National Wastewater Revolving Fund in Belize – US \$5 million:** Creation of the Belize Wastewater Revolving Fund (BWRF) to provide zero or below market interest rate loans for eligible wastewater treatment projects in Belize. The first project to be financed under the BWRF would be a regional, inter-municipal wastewater treatment system for the Placencia Peninsula.
3. **National Wastewater Revolving Fund in Trinidad and Tobago – US \$2 million:** The National Wastewater Revolving Fund will be created to support the efforts of the Government of Trinidad and Tobago (GOTT) to address the urgent issues confronting the wastewater sector. The executing agency for this fund will be selected following formal discussions with the GOTT. Potential first generation projects under the fund would include: (i) by-pass financing

for abandoned wastewater treatment facilities in Trinidad; and (ii) wastewater treatment financing for Tobago with private sector participation.

4. **National Revolving Wastewater Fund in Guyana – US \$3 million:** Creation of a financing mechanism that would support the efforts of the Government of Guyana in improving wastewater management, with specific focus on public-private partnerships. First generation project under discussion is to finance the Banks DIH wastewater treatment plant in Georgetown.

1.2.2 Selection Criteria for Financing Mechanisms and First Generation Projects

A process of identifying the first generation projects CReW's assistance was developed in consultation with water utilities, service providers, vendors, local financial institutions and key policy makers in various countries in the region. The financing mechanisms were developed around the types of first generation projects, taking into consideration other factors, such as institutional arrangements and level of political will.

The location of the first generation project selection was a demand driven process based on requests following presentations made by IDB staff and consultants at two annual meetings of the Caribbean Water and Wastewater Association (CWWA). These presentations focused on the scope and implementation of the CReW program and called on local utilities and wastewater project sponsors to come forward with project proposals. In addition IDB staff and consultants conducted one-on-one meetings with utility representatives from the region to seek their input and response to the CReW initiative.

All of the projects identified have the following characteristics:

- i) are high priority projects for water/wastewater services providers;
- ii) would produce significant improvements or prevent further erosion to the coastal water quality;
- iii) would stimulate policy reforms;
- iv) have had prior feasibility assessments including cost/benefit analyses ; and
- v) would require innovative financial and advisory assistance to bring project financing costs within ratepayers' ability to pay.

Each financing mechanism was built around the first generation project under development. This allowed the design of the financial models to reflect local financial conditions, regulatory frameworks, water utilities capacity and national government objectives. The innovative financing mechanisms proposed were drawn from successful financing mechanisms deployed in other countries that provide sustainable financing support to water and wastewater projects. During each mission, revisions to the financing mechanisms were made based on additional information and

discussions with multiple stakeholders. The summary of each financing mechanism in this report includes a description of the first generation project to be implemented under the pilot fund.

All of the projects identified have the following characteristics:

- i) are high priority projects for water/wastewater services providers;
- ii) would produce significant improvements or prevent further erosion to the coastal water quality;
- iii) would stimulate policy reforms;
- iv) have had prior feasibility assessments including cost/benefit analyses ; and
- v) would require innovative financial and advisory assistance to bring project financing costs within ratepayers' ability to pay.

From a technical perspective, the projects implemented under the CReW will consider a cross section of wastewater treatment technologies including traditional and low-tech technologies such as (among others):

- | | |
|--|--|
| • Infiltration percolation | • Membrane reactor |
| • Vertical flow reed beds flow filters | • Imhoff tanks |
| • Horizontal flow reed beds filters | • Activated sludge |
| • Natural lagoons | • Anaerobic ponds |
| • Aerated lagoons | • Facultative ponds |
| • Rotating biological contractors | • Maturation ponds |
| • Trickling filters | • Upflow Anaerobic Sludge Blanket (UASB) reactor |

In order to (i) ensure the long-term sustainability; (ii) achieve economic efficiency; (iii) safeguard the quality dimensions; (iv) promote the accessibility to all citizens; and (v) meet wider national objectives, in particular the protection of the environment, the most appropriate technology will be selected based on:

- | | |
|---|--|
| • Available space (land) | • Capital costs |
| • Scale (in terms of size of beneficiary population) | • Operation and maintenance costs |
| • Quality of discharges | • Energy requirements and availability |
| • Required effluent quality according to regulations and receiving water body | • Local capacity to operate |
| • Type of soil | • Temperatures |
| | • Inflow variations |

In addition, Since the GEF is seeking to deploy innovative and sustainable financing mechanisms in the Caribbean for wastewater projects, one of the requirements is that all projects financed by the financing mechanisms must be financially viable with a dedicated source of income for repayment. The failure of a project to repay would

undermine the credibility and viability of the financing mechanism and ultimately the CReW program and would fail to meet GEF objectives. For this reason, all projects funded under the CReW program will be subject to financing due diligence and demonstrate a credible source of revenues to repay any WRF loan.

1.3 Report Format

This report provides the following information for each of the CReW pilot innovative financing mechanisms:

1. Introduction
2. Financing Mechanisms
 - a. Description of the proposed innovative financing mechanism
 - b. Administrative arrangement for the implementation of the financing mechanism
 - c. Eligible projects
 - d. Exit strategy
 - e. Current status of financing mechanism
 - f. Next steps to implement financing mechanism
3. First Generation Project
 - a. First generation projects to be financed through the innovative financing mechanisms
 - b. Current status of projects
 - c. Next steps to implement projects
4. Annexes

2 Credit Enhancement Facility - Jamaica

2.1 Introduction

The National Water Commission (NWC) is the primary provider of potable water and sewerage services in Jamaica. The NWC reports that it provides 73% of the population with potable water. However, only 23% of its customers are provided with sewerage services. The NWC operates more than 1,000 water supply and over 100 sewerage facilities island wide. These vary from large raw water storage reservoirs to medium sized and small diesel-driven pumping installations serving rural towns and villages across Jamaica. The NWC facilities also include over 4,000 kilometers of pipelines and more than 500 kilometers of sewer mains across the island.

Based on discussions with the senior management of the NWC the initial concept called for the CReW program to provide a 12 year, zero interest, non-sovereign loan to the NWC to build two wastewater treatment facilities in Eltham Park and Ebony Vale. Under this plan, water tariffs of the two communities would be “ring fenced” for repayment of the CReW loan. After an indicative annual debt service table was provided to the NWC for these projects it was determined that the income of the communities was not sufficient to repay the loan at zero interest. As a result, the financial program of capital improvement was modified.

During subsequent discussions regarding alternative financing mechanisms, the NWC indicated that it had proposed to the Office of Utility Regulation (OUR) that a K-factor surcharge be established to fund capital projects that do not generate revenues but are necessary for system reinforcement and reliability and to comply with regulatory intervention by the National Environmental and Planning Agency (NEPA). In this regard the NWC proposed that the K-factor program incorporate provisions for the rehabilitation of 44 wastewater treatment plants in order to meet the enhanced regulatory standards imposed by NEPA. NWC also proposed that the program fund investments to reduce the level of non-revenue water (NRW) through a combination of main replacements and other technical and commercial interventions. A third component of the K-factor program, as proposed by NWC, would incorporate the expansion of the collection networks for the newly commissioned, but underutilized, Soapberry Wastewater Treatment Plant. Under a Determination Notice published by the OUR on April 28, 2008 the NWC was allowed to add a special K-factor surcharge to water bills to fund all proposed projects including construction of 44 wastewater treatment facilities. However it was determined that only wastewater treatment related k-factor projects were eligible for CReW assistance.

After review of the Determination Notice, it was decided that rather than collect and expend K-factor funds on an annual basis the proposal would have NWC issue loans against future K-factor collections. This would accelerate the implementation of the K-factor program through commercial bank financing. Under the proposal, the NWC would pool a number of smaller-scale K-factor projects for financing using annual K-factor collections as a revenue stream for annual debt service payments with the pledge of CReW funds as additional collateral held in a special reserve account.

2.2 Financing Mechanism

2.2.1 Description

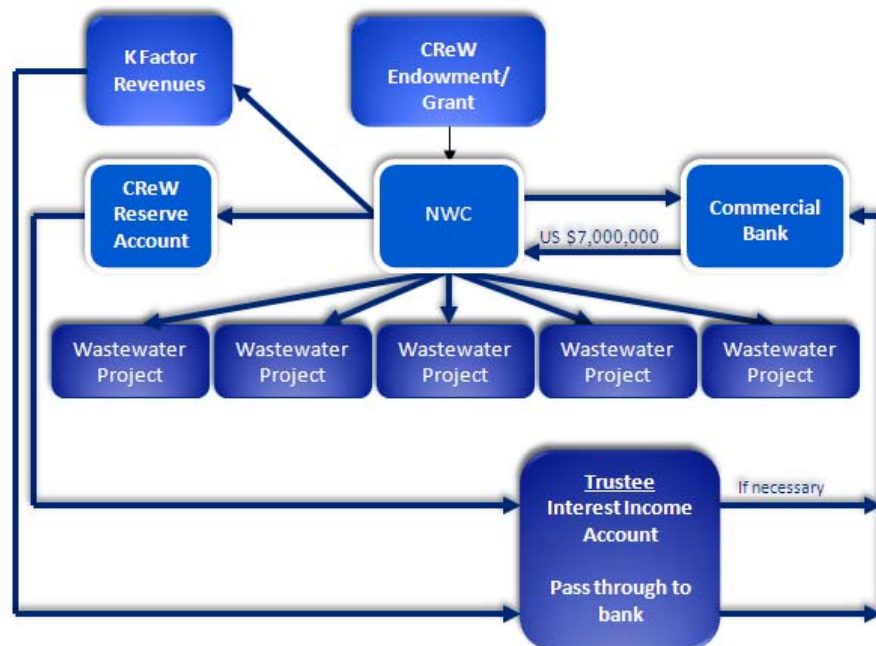
Under the proposed financing mechanism, US\$ 3 million in CReW funds would be provided to the NWC as an endowment/grant on the condition that these funds would be placed in a reserve account and pledged as collateral for commercial bank financing of NWC wastewater projects. The source of payment and collateral for the commercial bank loans would be annual K-factor revenues. The US\$ 3 million held in a cash reserve account (which is considered collateral by the Central Bank of Jamaica) would allow banks to lower financing costs and lend at a higher level.

A draft term sheet containing the details of the proposed financing mechanism was prepared and shared with local commercial banks to facilitate focused discussions with these banks regarding the K-factor financing program. *(See Annex A)*

While local banks indicated that they would need to do a full risk and cash flow analysis for any financing mechanism supported with K-factor revenues, they were supportive of the financing mechanism and indicated that such a financing mechanism is viable in Jamaica. The banks felt that CReW funds placed as cash collateral in a reserve account would enhance the financing mechanism and possibly produce lower costs of capital and/or extension of maturities. A key factor to the banks would be the size of the reserve account relative to the total loan amount.

As a result of these findings, local banks, the Minister of Housing and Water and the President of the NWC supported the use of CReW funds as cash collateral for a NWC financing. The structure of this financing mechanism is provided below.

Figure 2-1: K-factor Financing Mechanism Diagram



Based on discussions with local banks and the President and senior staff of the NWC, the following elements of the CReW financing mechanism were approved:

- Commercial bank financing for the K-factor program would be implemented in phases
- The first financing will include 11 wastewater projects of the 44 projects identified in the Determination Notice
- The size of **the first phase would be approximately US\$ 10 million**
- The financing would be done through a Master Trust Indenture (MTI) subject to NWC's legal counsel's review and approval
- To facilitate multiple financing through the MTI, the trust will contain an additional debt test clause.

There are several advantages to structuring the K-factor financing through a MTI including the following:

- The MTI provides additional security to the lenders and may lower costs of financing.
- The Trustee will have "first claim" on all K-factor revenues to meet debt service payments.
- The Trustee can issue notes to banks for each tranche of financing through the standard terms of the MTI.
- The Jamaica Trustee Act of 1973 provides sufficient authority for a MTI financing.

Other aspects of the Trust include:

- The CReW would make a US\$3 million grant to the Trustee for the benefit of the lenders and subsequently to NWC as an exit strategy.
- The Trustee selected for the financing would also be designated the bank to receive all K-factor payments under the conditions of the OUR Determination Notice of April 28, 2008.
- 15 days before debt service payments are due, the Trustee exercises its authority to transfer sufficient K-factor funds into a payment account to make debt service payments.

The NWC, through the MTI, will pledge all of its K-factor revenues to lenders as a condition of the loan agreements. This pledge will be reflected in the "First Call" provision of the MTI.

Because K-factor capital improvement projects will advance in stages based on project approvals and construction schedules, implementing K-factor financing mechanism in stages avoids unnecessary payment of commitment fees. It also more closely matches income from loan proceeds to necessary progress payments for projects. Moreover, financing the total K-factor capital program in one new debt issue would strongly test commercial lenders' risk appetite which could lead to higher interest charges or a failure of the market to respond.

Multiple financings based on a single revenue stream can create unique issues for the lenders and borrowers. Since the first lender receives a pledge of all K-factor revenues, it would have senior position on subsequent financing through the MTI. If the first lender were to receive a pledge of K-factor revenues only equal to the debt service payment on the first loan, all subsequent lenders would be subordinated to this K-factor pledge. This would severely reduce financial options going forward.

To deal with this issue, the MTI will contain an “Additional Debt Test” provision. It will state that NWC can issue new debt only if total debt service payments (inclusive of the payments under the terms of the proposed new loan) do not exceed a certain percentage of total K-factor revenue collections. This protects the first lender by not diluting its risk coverage and allows subsequent lenders to take a pari passu position with previous lenders on all K-factor revenue claims.

In addition to the CReW reserve account an additional credit enhancement will include a debt service reserve account equal to one year total annual debt service payments. This reserve account may be funded out of loan proceeds. Draws against this account will occur before the CReW cash reserve account is accessed local currency reserve account will generate considerably more annual interest income than an account held in US dollars.

The CReW cash collateral reserve account and the debt service reserve account would be held by a Trustee for the benefit of the lenders. If K-factor revenues in the trust account are insufficient to meet debt service payments, the Trustee is instructed to draw against the Debt Service reserve account first and only after that account is depleted will the Trustee access the CReW cash reserve account to meet required debt service payments. In all other respects the CReW cash collateral and the debt service account will be pledged to lenders under the same provisions of the K-factor revenues.

The first loan under the MTI will be approximately US\$ 105 million. The first loan will be smaller than subsequent financings, which will total US\$ 300 million over time, once the project approval process moves into full gear. As a result, while the US\$ 3 million in CReW cash reserves would be substantial for the first loan, with each subsequent loan the cash collateral as a percentage of outstanding K-factor financing will decline.

This is not considered a major problem for the following reasons:

- First, the initial loan will be considered the most risky as the K-factor repayment process will be tested by this loan. Any shortcomings in the process will be identified and corrected through this loan. After a year of timely K-factor payment on the first loan, subsequent loans should have a lower risk profile. A larger cash reserve relative to loan amount is therefore appropriate for the first loan and becomes less important (as it relates to this particular risk) for subsequent loans.
- Second, the cash placed in the reserve account will be invested and earn interest income over time. The current rate for a one year CD in Jamaica is about 8.5%. Interest income from the reserve account would stay in the

account so that the amount grows over time as the amount of financing for K factor projects increases.

- Third, as the initial loan is repaid, the outstanding principal relative to the amount of funds in the reserve account will decline. While subsequent loans will increase the total loan amount for K-factor projects, the total outstanding principal will be reduced by the periodic debt service payments on earlier loans.

In the final analysis, the amount of risk that can be supported by the cash reserve will be a judgment made by the banks. Nevertheless, they will take into account these mitigating factors in their calculations of risk and pricing of the loan capital.

2.2.2 Administration

The NWC will be the executing agency for the pilot credit enhancement facility in Jamaica. As the pilot executing agency, NWC will be required to manage the reserve account in accordance with the operational guidelines outlined in Annex B and will be required to establish a project management unit (PMU) to manage the projects for which the guarantee is being used to secure financing.

The number of smaller-scale projects in the K-factor program required consideration of a streamlined IDB review and approval process for any project assisted with CReW resources. Under the proposed approach, the IDB would review NWC's technical, financial, environmental and procurement policies for selection, design and construction of wastewater projects to determine if NWC practices are in compliance with their own and IDB policies. The United States Trade and Development Agency (USTDA) was contacted to determine their interest in funding an independent consultant to perform this review and report on NWC's current project identification, development, implementation and operation and maintenance practices. USTDA is currently working with the IDB on this effort. Terms of Reference for the consultant have been drafted and are included in Annex C.

The commercial banks saw great benefit in IDB's review of NWC's project selection and construction processes. They felt such a review would give the banks greater comfort that the NWC projects would meet environmental standards. The Minister of Water and Housing felt this would also be helpful to him and the NWC in their own assessment of NEPA requirements and compliance policies

2.2.3 Eligible Projects

Three categories of NWC projects are eligible for support from annual K-factor funds as follows:

- J\$ 1.0 B for 44 existing wastewater projects
- J\$ 7.2 B for selected wastewater collection projects
- J\$ 22.0 B for non-revenue water (NWR) projects

The 44 wastewater projects identified for the K-factor program would clearly qualify for CReW support. It was also decided that the wastewater collection projects for the

Kingston and Saint Andrews area would also qualify as these projects are designed to bring larger amounts of wastewater to a newly completed treatment facility now operating at about 40% of its capacity.

The J\$ 22 billion identified for non-revenue projects raised issues of eligibility for CReW support. These projects do not directly improve wastewater services in Jamaica and were therefore considered outside the eligibility of the CReW program.

2.2.4 Current Status

The following documents have been drafted in preparation for the first commercial bank financing of the K-factor program:

- Draft term sheet for K-factor financing. (Annex A)
- Draft Request for Proposal for commercial bank financing of K-factor projects. (Annex C)
- Construction schedule for first tranche of K-factor projects. (Annex D)

2.2.5 Next Steps

Activity	Responsible Party	Deadline
Issue RFP for commercial bank financing.	NWC	To be done in fourth quarter of 2010.
Obtain USTDA approval for funding and retain consultant to review NWC's technical, financial, environmental and procurement policies for determination of compliance with IDB policies.	IDB	Mid September 2010
Select commercial bank for financing and negotiate final terms of the loan agreement.	NWC	To be completed by second quarter of 2011.
Draft MTI to be completed after selection of local bank.	NWC	To be completed by second quarter of 2011.
Execute loan between NWC and commercial bank.	NWC	To be completed by fourth quarter of 2011.
Execute CReW Grant Agreement with NWC.	IDB	To be completed by first quarter of 2011.

2.3 First Generation of Projects

2.3.1 Overview

The full US\$348 million in K-factor projects are planned for implementation over several years. Projects for the first financing stage were selected based on their

readiness to proceed. Based on the current status of the 44 wastewater projects it is anticipated that 11 projects with total costs of US\$10 million will be available for financing and implementation at the beginning of 2011.

Based on previous work done by the NWC, 11 projects have gone through the initial evaluation phase. These 11 projects, which are in various stages of design, procurement and construction, are listed in Table 2-1. This table provides information on the location and treatment technology at each facility.

Table 2-1: Summary of the 11 Wastewater Projects

No.	Location	Project - WWTP	Type of Treatment Technology	Capacity in MIGD	Budget in JM\$	Project Scope
Category A.1.1. – Design Build Projects						
1	KSA	Elleston Flats	Contact Stabilization	0.24	44.00	A total rehabilitation of WWTP will be required. Including the rehabilitation and recommissioning of the reactor tank which is now idle. There is a high demand for sewerage services in this area.
2	St. Catherine	Ensom City	Extended Aeration	0.84	6.00	Rehabilitation of the WWTP is underway.
3	St. Catherine	De La Vega City	Wastewater Stabilization Pond	0.35	25.00	Major capital expenditure will be required. Reestablishment of the influent pipe spanning the Rio Cobre River to the stabilization ponds & upgrading to pumping station with rehabilitation of the sump and grounds will be required.
4	St. Thomas	Yallahs Ponds	Wastewater Stabilization Pond	0.06	50.00	The WWTP was extensively damaged and is to be reconstructed. No available land to facilitate reconstruction. NHT to be consulted on the capacity of their plant for the possibility of a direct connection which is within close vicinity/proximity to the NWC's facility. An alternative option will be the procurement and installation of a portable plant.
5	Clarendon	Longville	Aerated Lagoon	0.600	11.80	TBD
6	Clarendon	Mineral Heights	Oxidation Ditch	0.339	20.00	TBD
7	St. Catherine	Greater Portmore	Wastewater Stabilization Pond	4.000	40.00	TBD

No.	Location	Project - WWTP	Type of Treatment Technology	Capacity in MIGD	Budget in JM\$	Project Scope
8	St. Catherine	Ebony Vale	Aerated Lagoon	0.250	14.00	Engineering designs for WWTP is completed and are awaiting NEPA's approval.
			Subtotal		210.80	
Category A.1.2. – Traditional Design-Bid-Build Projects						
1.0	Westmoreland	Negril Ponds	Waste Water Stabilization Pond -WSP	4.00	66.91	Tenders are currently being invited for the rehabilitation of this WWTP. The NWC contribution to the project is Euro 0.60 or JM\$66.91M
2.0	St. Catherine	Eltham Park	Oxidation Ditch	0.99	85.00	Engineering Designs are underway
3.0	St. Catherine	Twickenham Park	Extended Aeration	0.20	50.00	Construction of this WWTP is advanced. Construction is being undertaken by the National Housing Trust (NHT). However, the NWC will have to undertake works to decommission its existing WWTP and construct a new Pumping Station to have its flows diverted to the new WWTP.
			Subtotal		201.91	
GRAND TOTAL					412.71	

This implementation of these projects will complement the studies performed by NWC that were financed under the IDB Kingston Water and Sanitation Project loan (JA-0114).

2.3.2 Current Status

The current status is as follows:

- NWC is currently developing the request for proposal for design-build services for the 8 design-build projects.
- NWC and USTDA are currently in the process of executing the grant agreement, which will happen in August 31. Following the execution of the agreement, USTDA will procure the services outlined in Annex B.

2.3.3 Next Steps

Activity	Responsible Party	Deadline
Issue RFP for design-build services	NWC	TBD
Select contractor to provide design/build services	NWC	TBD
Select contractor for the construction of projects in Category A.1.2	NWC	TBD

2.4 Annexes

The following annexes are included for the credit enhancement facility:

- Annex A. Draft Term Sheet for NWC's K-Factor Financing
- Annex B. Terms of Reference for Activities to be Financed by USTDA
- Annex C. Sample Request for Proposals to Provide Capital Financing
- Annex D. Construction Schedule for the 11 Selected Projects

Annex A – Draft Term Sheet for NWC’s K-Factor Financing

Borrower: National Water Commission (NWC)

Loan Amount: US\$ 10 million

Loan term: 12 years

Interest: To be determined through competitive RFP process

Use of loan proceeds:

Rehabilitation of wastewater treatment facilities and construction of selected collection systems for the Soapberry wastewater treatment plant. (Specific projects, total projected costs, and construction schedules will be included in the Request for Proposals).

Collateral:

- Pledge of net K-factor revenues collected by the NWC pursuant to Office of Utilities Regulation (OUR) Determination Notice Issued April 28, 2008. Document Number: WAT 2008/01. Net K factor revenues will be placed in a separate Loan Reserve Account and held for repayment of the Loan.
- The Loan is additionally secured by a pledge of the NWC to fund and maintain a separate Debt Service Reserve Account (DSRA) in an amount equal to the lesser of: **125%** of the average annual amount of principal, interest and premium, if any, required to be paid during all Fiscal Years in which the Loan will be outstanding calculated as of the date of issuance.
- The Loan is additionally secured by a US\$3 million contribution from the Global Environment Facility (GEF) through the Inter-American Development Bank’s (IDB) “CReW” program. The CReW funds will be placed in a CReW Debt Service Reserve Account and the Lender will have first call on these funds if the NWC is unable to make debt service payments from K-factor revenue collections. This collateral pledge does not constitute a general obligation of the IDB or the GEF. No recourse may be had against any funds or assets of the IDB or the GEF to enforce payment of any amounts owing under or with respect to any K-factor loans.
- The Loan shall be secured by a perfected first security interest in all K-factor revenues and all funds in the Loan Reserve Account.
- The K-factor Loan Agreement does not constitute a general obligation of the Government of Jamaica, and neither the full faith and credit nor the taxing powers of the Government of Jamaica is pledged for the payment of the principal of, premium (if any) or interest on the K-factor Loan. No recourse may be had against any funds or assets of the Government of Jamaica NWC to enforce payment of any amounts owing under or with respect to the K-factor Loan.

Interest Income on Reserve Accounts:

All funds in the Loan Reserve Account, the Debt Service Reserve Account and the CReW Debt Service Reserve Account will be invested in highly secured, liquid assets.

All interest income earned on the Loan Reserve Account and the Debt Service Reserve Account above interest income needed to meet the Parity Loan requirements (set out below) will flow to the NWC and will be used first to cover operational expenses of K-factor projects financed under this Loan Agreement and then to other NWC operations.

All interest earned on the CReW Debt Service Reserve Account shall be retained in the account.

Parity Obligations:

The NWC shall have the authority under the Loan Agreement to issue parity obligations to provide funds for any K-factor investment projects as defined by the OUR Notice of Determination, but only if no Event of Default has occurred and is continuing, there is no deficiency in the Loan Revenue Account, the balance in the Loan Reserve Account is at least equal to the Reserve Requirement, and there has been filed with the NWC either:

- A certificate of the President of the NWC stating that net K-factor revenues for the Base Period were not less than one hundred twenty-five percent (125%) of the average annual debt service on all K-factor Loans, with the proposed Parity Obligations treated as outstanding; or,
- A certificate or opinion of a qualified consultant stating that the adjusted net K-factor revenues are at least one hundred twenty-five percent (125%) of the average annual debt service on all outstanding K-factor loans, with the proposed Parity Loan treated as outstanding.

Withdrawal of K-factor Funds for Other K-factor Eligible Projects:

The NWC will have the authority to draw from the K-factor Loan Reserve Account to support the construction and implementation of other K-factor eligible projects identified in the terms of the OUR Determination Notice provided that K-factor revenues meet the requirements of Parity Obligations (set out above) after the withdrawal of funds for other K-factor projects.

The NWC will not have access to the CReW Debt Service Reserve Account for this purpose.

At the termination of all outstanding loans support by the CReW Debt Service Reserve Account under the Loan Agreement, all funds in the CReW Account will be transferred to the NWC under the terms of a separate agreement with IDB.

Other Covenants:

The NWC covenants it will:

- Promptly cause the principal, premium, if any, and interest on the K-factor Loan to be paid as they become due in accordance with the provisions of the First K Factor Loan Agreement and any subsequent K-factor Loan Agreements.
- Maintain records relating to the collection of K-factor funds and accounts in accordance with generally accepted accounting principles, and to have records to be audited annually, and the audit report made available for the inspection of Lenders.
- For the benefit of Lenders, not issue additional K-factor Loans or other obligations having a claim superior to the claim of the Lender upon the K-factor Loan Agreement.
- Not amend the K-factor Loan Resolution in any way that materially and adversely affects the right of the Lender; however, this covenant shall not be construed to limit the ability of the NWC to issue additional K-factor Loans pursuant to the Loan Resolution.
- Promptly deposit K-factor revenues into the Loan Reserve Account as required by the K-factor Loan Resolution.
- Operate all K-factor wastewater treatment facilities funded under the Loan Agreement in a sound, efficient and economic manner in compliance with all health, safety and environmental laws.
- Cause all K-factor wastewater treatment facilities funded under the Loan Agreement to be maintained, preserved, reconstructed, expanded and kept in good repair, working order and condition.

Conditions Precedent to Each Drawdown:

Customary for credit facilities of this nature (with customary qualifications) and others arising as a result of due diligence, including, but not limited to, the following (each of which must be reasonably satisfactory to the Lender):

- Receipt by the Lender of a borrowing request (which shall include customary certifications as to the status of construction of the project) from the NWC;
- No Default or Event of Default (as certified to by the NWC);
- All representations and warranties (excluding any that expressly relate to an earlier date) are true and correct in all material respects (as certified to by the NWC);
- The Lender shall have received confirmation from the Independent Engineer to the effect that the funds to be drawn are to be used for approved project costs consistent with the terms of the Loan Agreement.

- No litigation that could reasonably be expected to have a Material Adverse Effect; and
- All necessary permits, licenses, consents, and other approvals, including compliance, then required for the project, and not customarily obtained at a later stage of development shall have been obtained, shall be in effect, shall have been provided to the Lender and, except with respect to non-discretionary, ministerial permits, all relevant waiting/appeal periods shall have expired and no such permit or approval shall be subject to appeal.

Negative Covenant:

The NWC will be subject to customary and usual negative covenants (with customary qualifications and baskets), including, but not limited to, the following:

- The NWC will not permit any liens on K-factor projects other than permitted liens.

Annex B –USTDA Terms of Reference

Terms of Reference

JAMAICA NATIONAL WATER COMMISSION PILOT PROJECT

A. BACKGROUND

The Inter-American Development Bank (IDB) (in partnership with the Global Environment Facility (GEF) and United Nations Environment Programme (UNEP)) is seeking to use GEF resources to help mobilize greater investments in wastewater management in the Caribbean region. The primary objective of the initiative is to establish innovative, feasible financial instruments through pilots for cost effective and sustainable financing of wastewater management in the Caribbean region.

The initiative will support policy reforms and regional dialogue but most importantly, financing of pilot projects such as, but not limited to: (i) an inter-municipal wastewater system for the Peninsula of Placencia in Belize (Inter-municipal water services); (ii) a financial arrangement with the National Water Commission (NWC) of Jamaica to secure funding through the pledging of K-factor revenues for the rehabilitation of wastewater facilities; and (iii) a national revolving fund in Trinidad and Tobago. It will also finance a Project Development Facility window that would provide technical assistance to project sponsors to help bring project to bankable status.

The purpose of this Terms of Reference is to support the development of the Jamaica National Water Commission Pilot Project, which was identified above. The National Water Commission (NWC) is the primary provider of water and wastewater services in Jamaica and collects wastewater from over 600,000 people across the island. While there are other water service providers in Jamaica (such as Parish councils and private water companies), the NWC is the largest service provider. The NWC currently operates more than 1,000 water supply facilities and over 100 sewerage facilities island-wide. Approximately 80% of Jamaica's population is currently served by NWC water services and 30% served by NWC wastewater management infrastructure and facilities in major towns or associated with several housing developments in various locations throughout the country. In recent years, the NWC has sought to increase its service coverage and to rehabilitate or improve the effectiveness of its existing wastewater management infrastructure. This has included the evaluation and implementation of upgrades and repairs to its wastewater treatment facilities.

These wastewater projects are envisioned to be funded through a K-factor assessed as part of the tariff. To date, 44 projects have been identified to meet the requirements to be funded through K-factor funds. These projects are in different phases of planning, design, and construction.

STUDY GOAL - The primary goal of the Jamaica National Water Commission Pilot Project Study (Study) is to ensure that the wastewater projects funded using K-factor funds are effectively and efficiently developed and implemented and that the wastewater facilities are operated based on all applicable policies, procedures, standards and laws.

STUDY OBJECTIVES - The key objective of the Study is to assess the implementation of the policies, procedures, standards and laws governing NWC's project development and facility

operation, focusing specifically in the wastewater projects being funded through the K-factor fund.

B. STUDY WORK PLAN

The following general work tasks and related activities define the work that the Contractor selected to undertake the Study will need to accomplish.

Work Task 1 - DATA COLLECTION AND FACILITY SELECTION

As part of this task, the Contractor shall compile the appropriate data and select three facilities for the assessment. At the minimum, the following activities shall be performed:

- 1.1 Review the NWC's wastewater facilities that have been identified to have projects funded from the K-factor fund and select three facilities currently under construction that will be reviewed as part of this assessment. In selecting the three facilities, the diversity of the following should be considered:
 - The facilities in the system, such as size, age, location, and treatment technology.
 - The types of on-going projects.
- 1.2 Compile all available information on the three facilities, which will include type of treatment, age, design capacity, compliance history, available general engineering studies, engineering design documentation, wastewater generation and water quality data, and operation and maintenance data.
- 1.3 Compile information on the ongoing projects at the selected facilities, including planning, design, procurement and construction management information, as applicable.
- 1.4 Compile and review all policies and procedures that guide NWC's project development and facility operations. These include:
 - NWC's policies and procedures for the planning, design, procurement, and construction of projects and the operation and maintenance of facilities.
 - All relevant existing or pending statutory and regulatory requirements, including all laws and regulations related to the treatment and discharge of wastewater to receiving waters (surface and groundwater) in Jamaica.

Deliverable – Selection of three wastewater treatment facilities and their applicable projects and identification of the policies, procedures, standards and laws that will govern the assessment.

Work Task 2 – FACILITY AND PROJECT ASSESSMENT

This work task is intended to assess the implementation of applicable policies, procedures, standards and laws related to selection, planning, design, procurement, construction, operation and maintenance activities at the selected facilities. Specific activities to be accomplished within this work task include the following:

- 2.1 Conduct a facility assessment on the three selected wastewater treatment facilities. This assessment should focus on the operational and maintenance activities at the facilities, the condition of the equipment and the historical compliance of the facility. In the review of these activities, the Contractor shall document the current practices in comparison to the policies, procedures, standards and law, especially for deviations.
- 2.2 Conduct a project assessment of three treatment facilities. The evaluation should focus on the review of the current project phase in addition to any previous phases of the project.

The areas of review include selection, planning, design, procurement and construction, including the technology selection and environmental assessments. In the review of the projects, the Contractor shall:

- Document the current practices in comparison to the NWC's policies, procedures, standards and law, especially for deviations.
- Document the current practices in comparison to the IDB's policies, procedures, and standards, especially for deviations.
- Document the key activities involved in each NWC process.

2.3 Identify any areas where the applicable policies, procedures, standards and laws are not being implemented appropriately and provide recommendation on improvements or actions needed.

Deliverable - Summary of the condition and project assessments.

Work Task 3 - ENVIRONMENTAL IMPACT ANALYSIS

The objective of this work task is to evaluate the potential environmental impact of the upgrade and rehabilitation of three wastewater treatment facilities in Jamaica. This review shall identify potential positive and negative impacts of these projects. The review shall discuss which changes in policy or practice could lead to a substantial positive impact on the environment, and also the extent to which negative changes in policy or practice could be mitigated in the future. Specific tasks shall include:

3.1 Conduct a limited and focused environmental impact evaluation of the three selected projects in Jamaica.

Deliverable – A preliminary general environmental impact analysis of the three wastewater treatment projects relative to NEPA's standards approved by IDB.

Work Task 4 – DEVELOPMENTAL IMPACT ANALYSIS

The Contractor shall report on the potential development impacts of the K-factor projects in Jamaica and in the Caribbean region. While specific focus should be paid to the immediate impact of the K-factor projects, the Contractor shall include, where appropriate, any additional developmental benefits of the K-factor projects, including spin-off and demonstration effects such as the replication of unique technical activities to other countries in the region. The Contractor's analysis of potential benefits shall be as concrete and detailed as possible. The development impact factors are intended to provide NWC's decision-makers and other interested parties with a broader view of the potential effects of the K-factor projects.

4.1 Evaluate and provide estimates of the potential benefits in the following areas:

1. **Infrastructure/Industry:** Infrastructure success shall be defined as the sustainability and replicability of the recommended approach in managing wastewater conditions in Jamaica or other similar situations in other countries in the Caribbean Region.
2. **Market-Oriented Reforms:** The Contractor shall provide a description of the regulations, laws, or institutional changes that are recommended and the effect they would have if implemented. At a minimum, these should include changes that affect the economic sustainability of the proposed K-factor projects through revenue enhancement.

3. **Human Capacity Building:** The Contractor shall address the level of technical capacity available for development and management of the proposed K-factor projects. Key deficiencies shall be identified by the Contractor with recommendations for technical capacity enhancement to assure success of the K-factor projects.
4. **Technology Transfer and Productivity Enhancement:** The Contractor shall provide examples of new (to Jamaica) technologies that may be utilized as a result of the implementation of the projects.

Deliverable - An assessment and definition of the development impact of the projects including the short-term and long-term benefits to Jamaica and the region. The development impact analysis shall also provide an assessment of general human capacity capabilities and deficiencies so as to help assure sustainable success of the projects.

Work Task 5 - STUDY REPORT PREPARATION AND SUBMISSION

The Contractor shall prepare a comprehensive study report that summarizes the results of all analysis accomplished for this Study. The report shall serve as a basis for continuing development activity relevant to implementation of the Project and to supporting the evaluation and improvement of wastewater treatment facilities in Jamaica. Work task activities include the following:

- 6.1 Prepare a draft report and circulate 10 copies to Project team members for review and comment.
- 6.2 Meet with NWC Project team and other stakeholders to review comments on the draft report.
- 6.3 Incorporate pertinent comments into the final report.

Deliverable - A detailed and comprehensive report presenting and describing all elements of the Project as defined in the above work tasks.

The Contractor shall ensure that the Final Report is submitted in accordance with the USTDA Grant Agreement. The Final Report shall be a substantive and comprehensive report of all work performed to carry out all of the tasks set forth in this TOR and shall include, among other things, an Executive Summary and all deliverables. Each task of the Terms of Reference shall provide information and analysis consistent with the required chapters of the Final Report. The following specifies the required organization and outline of the Study Report which, at a minimum, will contain the following:

1. **Executive Summary.** This section will be a summary of all findings and recommendations associated with the Study.
2. **Purpose and Objective of the Study.** This section should contain a concise statement concerning the purpose of the Study and its basic objectives.
3. **Condition Assessment.** This section should include a summary of the current operating and maintenance activities at the facility relative to O&M standards, the compliance of the facility with regulatory standards, and the general condition of the equipment (electrical, mechanical, process, HVAC).
4. **Project Assessment.** This section will include a summary of the NWC's implementations of the relevant project development policies and procedures.

5. **Environmental Analysis.** A preliminary review of the Project's anticipated environmental impact. This review should identify potential negative impacts, discuss the extent to which they can be mitigated.
6. **Economical & Social Benefits.** This section of the report should disclose the potential economic and social benefits of the project as a result of the rehabilitation/upgrade of the wastewater treatment facilities.
7. **Key Host Country Development Impacts.** (Infrastructure, Human Capacity Building, Technology Transfer and Productivity Improvement and/or Market-Oriented Reform). These Development Impact factors are intended to provide the NWC's decision-makers and interested parties with a broader view of the project's potential effects on Jamaica.
8. **Conclusion.** This section will provide an overall conclusion on overall findings of the study and any recommendations for further actions.

The Contractor shall prepare and provide to the Grantee and to USTDA a Final Report in accordance with the Grant Agreement. In addition to any other required deliverables in accordance with the Grant Agreement, the Contractor will provide both the Grantee and USTDA with 6 copies (each) of the final report in hard copy and on CD-ROM. The CD-ROM version of the final report will include:

- Adobe Acrobat readable copies of all documents;
- Source files for all drawings in AutoCAD or Visio format; and
- Source files for all documents in MS Office 2003 or later formats.

C. PROJECT TERM

The project as defined by these Terms of Reference will be accomplished within four months of the notice to proceed by the USTDA Grantee.

D. CONTRACTOR SELECTION CRITERIA

The feasibility study team's skill set shall include a number of defined capabilities. These capabilities are listed below. The relative weight of each experience criteria will be the basis by which a Contractor is hired to undertake the Study.

- Relevant experience of project team members (10%)
- Project Approach (20%)
- Regional experience in the Caribbean region and in Jamaica, including knowledge of the project planning, design, procurement, construction, compliance, operations and maintenance requirements that govern NWC (10%)
- Wastewater treatment plant rehabilitation, design and operation experience (30 %)
- Wastewater utility assessment and capabilities evaluation experience (20%)
- Exposure and knowledge of the procedures used by and requirements of Inter American Development Bank (10%)

**Annex C – Sample Request for Proposal to provide Capital
Financing**

GOVERNMENT OF JAMAICA

NATIONAL WATER COMMISSION

Request for Proposal

To Provide

Capital Financing

For

Selected K-Factor Projects

Issue date:

____, 2010

THIS DOCUMENT IS TO BE TREATED AS STRICTLY CONFIDENTIAL

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1. Executive Summary

1.1 Summary of the Request

The National Water Commission (NWC) invites proposals from qualified and experienced Financial Institutions who can provide Capital Financing of US\$10 Million for at least 12 years to finance rehabilitation of wastewater treatment facilities and construction of selected collection systems for the Soapberry wastewater treatment plant (hereinafter referred to as the K-factor Projects) as identified in Section 8.3 below.

1.2 Background

On April 28, 2008, the Office of Utility Regulation (“OUR”) issued a Determination Notice (Document Number: WAT 2008/01) granting the National Water Commission (“NWC”) authority to assess a special “K-factor” surcharge to finance capital costs for rehabilitation and mains repair that will not generate any significant increase in revenues. Section 11 of the OUR Act empowers the Office to prescribe rates for utility services. Section 5 of the OUR Act gives the Office the power to prescribe standards for measurement of quantity and quality of the utility service.

In this regard the NWC proposed that the K-factor incorporates provisions for the rehabilitation of wastewater treatment plants in order to meet the enhanced regulatory standards imposed by the National Planning and Environmental Protection Agency (NEPA).

The NWC also proposed that K-factor revenues be dedicated to projects that reduce the level of non-revenue water (NRW) through a combination of mains replacement and other technical and commercial interventions. A third component of the K-factor program would incorporate the expansion of the collection network for wastewater so as to reduce the average unit cost of treatment for the newly commissioned Soapberry wastewater treatment plant.

The X –factor is to be calculated as a deduction from the bill after the normal rates and PAM. The K-factor is to be calculated on the bill balance after the X-factor is deducted.

NWC shall account for the deemed K-factor cash inflow calculated on the basis of 95% of the K-factor billing. A separate bank account has been established with a local commercial bank to accommodate the cash flows from the K-factor and monthly report of balances and changes are sent by the NWC to the OUR within 45 days of each reporting period. K factor revenues shall be deemed collected within 45 day after billing.

The K-factor Loan does not constitute a general obligation of the Government of Jamaica, and neither the full faith and credit nor the taxing powers of the Government of Jamaica is pledged for the payment of the principal of, premium (if any) or interest on the K-factor Loan. No recourse may be had against any funds or assets of the Government of Jamaica to enforce payment of any amounts owing under or with respect to the K -factor Loan.

1.3 K-factor Project Scope

The K-factor financing program will include 44 wastewater treatment projects and construction of selected wastewater collection systems for the Soapberry wastewater treatment plant.

1.4 K-factor Capital Cost

The capital cost of the K-factor Project is US\$10 million broken down in Section 8.4 below. Appropriate development costs and contingencies have been included in the respective figures.

1.5 Contractual Arrangements

_____ has been selected as the contractor for implementation of the K-factor Projects. _____ is a major international construction and development group which has, since 1999, successfully executed several projects for the NWC.

1.6 Financing Plan/Additional Debt Test

NWC intends to finance the K-factor projects using commercial loans at the most competitive rates available. The attached Term Sheet provides the specifics of the proposed financing.

This Loan will be the first tranche of several financings supported by K-factor collections.

The ability of the NWC to issue new loans will be subject to an additional debt test under which the NWC must certify that sufficient K-factor funds are available to meet the DSRA requirements of the existing and proposed new financing. K-factor funds sufficient to meet the DSRA requirement of the new loan will be placed in the DSRA prior to loan execution.

1.7 Credit Enhancements

Two credit enhancements are proposed for the Loan to address repayment risk.

First, the NWC will establish a Debt Service Reserve Account (DSRA) funded at 1.25 of the annual debt service payments under this K-factor financing plan. The DSRA will be pledged to the lender and held in escrow by a local bank.

Second, the NWC will place US\$3 million in a special repayment account pledged to the lender and held in an escrow account with a local bank. Funding for this account will be provided by the Inter-American Development Bank as a grant/endowment from the Global Environment Facility (GEF).

This collateral pledge does not constitute a general obligation of the IDB or the GEF. No recourse may be had against any funds or assets of the IDB or the GEF to enforce payment of any amounts owing under or with respect to any K-factor loans.

1.8 Additional Information

Additional information on the Project may be obtained by contacting NWC as follows:

National Water Commission
28-48 Barbados Avenue
Kingston 5
Jamaica
West Indies

Attention: Mr. Vernon Barrett
Title: Vice President, Corporate and Strategic Planning
Telephone: 876 919 0832
Fax: 876 929 6285
E-mail: vernon.barrett@nwc.com.jm

2. Terminology

The following terms will apply to this Request for Proposal and to any subsequent Contract. The submission of a proposal in response to this Request for Proposal indicates acceptance of the following terminology.

Table 2-1: Terminology

Term	Meaning
Proposal Due Date	November __ , 2010
Capital Financing	Financing and credit arrangement required by the NWC for the K-factor projects as described herein.
Contract	Written agreement resulting from this Request for Proposal executed by the NWC and the Contractor for the Capital Financing of the Project which will include the Term Sheet(s) and any additional terms and conditions attached thereto.
Contractor	Successful Proponent to this Request for Proposal who enters into a written Contract with the NWC.
Financial Institution	Bank, trust company, credit union, insurance or finance company (including their wholly owned subsidiaries) capable of providing the Capital Financing.
Forward Rate Setting Option	"Forward Rate Setting Option" means an option that would enable the NWC to lock in a rate of interest for a specified term on a forward basis.
Mandatory Requirement	An essential prerequisite for a proposal to receive consideration.
MHW	Ministry of Housing and Water of Jamaica

Term	Meaning
MOFP	Ministry of Finance and Planning of Jamaica
NWC	National Water Commission of Jamaica, the island's major water supply and sewerage service provider.
Preferred Proponent	Proponent selected by the <i>NWC</i> for proceeding to negotiation and execution of the Contract.
Project	K-factor projects as described herein.
Proponent	Financial Institution that submits, or intends to submit, a proposal in response to this Request for Proposal.
Request for Proposal	Invitation to Proponents to submit a proposal for the provision of the Capital Financing in accordance with requirements specified in this document.
RFP	Request for Proposal
Successful Proponent	Proponent, if any, with whom the <i>NWC</i> executes the Contract.
Term Sheet	Summary of the Capital Financing provided by a Proponent, prepared in accordance with this RFP.

3. Request for Proposal Process

3.1 Receipt Confirmation Form

Proponents are advised to fill out and return the attached Receipt Confirmation Form (Appendix C) by __, 2010. All subsequent information regarding this RFP, including changes made to this document, will be directed only to those Proponents who return the form. Subsequent information will be distributed by the method indicated on the Receipt Confirmation Form.

3.2 Enquiries/Additional Information

All enquiries related to this RFP are to be directed, in writing, to the following address. Information obtained from any other source is not official and should not be relied upon. Enquiries and responses will be recorded and may be distributed to all Proponents at the *NWC*'s option.

National Water Commission
28-48 Barbados Avenue
Kingston 5
Jamaica
West Indies

Attention: Mr. Vernon Barrett
Title: Vice President, Corporate and Strategic Planning
Telephone: 876 919 0832
Fax: 876 929 6285
E-mail: vernon.barrett@nwc.com.jm

3.3 Pre-Bid Meeting

Depending on the enquiries received, NWC, at its sole discretion, may hold a pre-bid meeting. The location, date and time of this meeting will be communicated to Proponents at least seven (7) days prior to the meeting.

3.4 Deadline and Location for Proposal Submission

Three complete copies of each proposal must be received by 2:00 pm, Local Time, on the Proposal Due Date at:

National Water Commission
28-48 Barbados Avenue
Kingston 5
Jamaica
West Indies
Attention: Mr. Vernon Barrett

Proposals must not be sent by facsimile or electronic mail. Proposals and their envelopes should be clearly marked with the name and address of the Proponent and the Project title.

3.5 Late Proposals

Late proposals will not be accepted and will be returned to the Proponent.

3.6 Eligibility

Proposals will not be evaluated if the Proponent's current or past corporate or other interests may, in the *NWC's* opinion, give rise to a conflict of interest in connection with the Project.

3.7 Evaluation Committee

Evaluation of proposals will be conducted by an Evaluation Committee formed by the NWC.

3.8 Evaluation and Selection

The Evaluation Committee will check proposals against the mandatory criteria. Proposals not meeting all mandatory criteria will be rejected without further

consideration. Proposals that do meet all the mandatory criteria will then be assessed and scored against the desirable criteria. The NWC's intent is to enter into a Contract with the Proponent who, subject to minimum score requirements, has the highest overall ranking with respect to the desirable criteria.

3.9 Negotiation Delay

If a written Contract cannot be negotiated within thirty (30) days of notification to the Preferred Proponent, or such earlier time as determined solely by the NWC, the NWC may, at its sole discretion at any time thereafter, terminate negotiations with that Proponent and either negotiate a Contract with the next qualified Proponent or choose to terminate the RFP process and not enter into a Contract with any of the Proponents.

3.10 Debriefing

At the conclusion of the RFP process, all Proponents will be notified. Unsuccessful Proponents may request a debriefing meeting with the NWC.

3.11 Declining to Submit a Proposal

If, after reviewing this RFP, the recipient decides that it does not wish to submit a proposal, the RFP document must be returned to the NWC forthwith at the address shown in section 3.4 of this RFP.

3.12 Estimated Time-Frames

The following timetable outlines the anticipated schedule for the RFP and contract process. The timing and the sequence of events resulting from this RFP may vary and shall be ultimately determined by the NWC.

Event	Anticipated Date
Request for Proposal is issued	TBD
Request for Proposal closes	TBD
Proposal evaluation completed and GOJ approval obtained	TBD
Preferred Proponent notified	TBD
Contract is signed	TBD
Funding available for draw-down	TBD

4. Proposal Preparation

4.1 Signed Proposals

The proposal must be signed by a person authorized to sign on behalf of the Proponent in order to bind the Proponent to statements made in response to this RFP. The Proponent should ensure its proposal includes a letter or statement(s) substantially similar in content to the sample provided in Appendix A.

4.2 Irrevocability of Proposals

By submission of a clear and detailed written notice, the Proponent may amend or withdraw its proposal prior to the closing date and time. Upon closing time, all proposals become irrevocable, subject to section 4.6. A Proponent who has withdrawn a proposal may submit a new proposal prior to the closing, provided that such proposal is done in accordance with the terms and conditions of this RFP.

4.3 Changes to Proposal Wording

The Proponent will not change the wording of its proposal after closing, as indicated in section 3 of this RFP, and no words or comments will be added to the proposal unless requested by the NWC for purposes of clarification.

4.4 Acceptance of Terms

Unless specifically excluded in writing, all the terms and conditions of this RFP are accepted by the Proponent and incorporated in its proposal.

4.5 Proponents' Expenses

Proponents are solely responsible for their own expenses in preparing, and submitting a proposal and for subsequent negotiations with the NWC, if any. NWC will not be liable to any Proponent for any claims, whether for costs or damages incurred by the Proponent in preparing and submitting the proposal, loss of anticipated profit in connection with any potential Contract, or any other matter whatsoever.

4.6 Duration of Proposal

All proposals submitted will be irrevocable for ninety (90) days after the closing date as defined in section 3.

4.7 Currency and Taxes

Fees, rates and prices quoted are to be in United States Dollars and inclusive of all applicable taxes.

5. Additional Terms

5.1 Sub-Contracting

a. Use of a sub-contractor (who should be clearly identified in the proposal) is acceptable. This includes a joint submission by two Proponents having no formal corporate links. However, in this case, one of these Proponents must be prepared to take overall responsibility for the successful performance of the Contract and this should be clearly defined in the proposal.

b. Sub-contracting to any firm or individual whose current or past corporate or other interests may, in the NWC's opinion, give rise to a conflict of interest in connection with the Project will not be permitted.

c. Where applicable, the names of approved sub-contractors listed in the proposal will be included in the Contract. No additional subcontractors may be added or other changes made to this list in the Contract without the written consent of the NWC.

5.2 Acceptance of Proposals

a. NWC is not bound to enter into a Contract with any Proponent. Proposals will be assessed in light of the evaluation criteria. NWC will be under no obligation to receive further information, whether written or oral, from any Proponent.

b. Neither acceptance of a proposal nor execution of a Contract will constitute authorization of any activity or development contemplated in any proposal that requires any approval, permit or license pursuant to any statute, regulation or by-law.

5.3 Form of Contract

By submission of a proposal, the Proponent agrees that, should it be identified as the Preferred Proponent, it is willing to enter into a contract with *NWC* incorporating substantially all the provisions set out in the Term Sheet(s) including any terms and conditions attached thereto. Each Proponent should provide a copy of their standard form of contract and must be prepared to modify the terms of that form and other related documents to reflect the requirements of this RFP, its proposal and any changes agreed to during negotiations.

5.4 Liability for Errors

While the NWC has used considerable efforts to ensure an accurate representation of information in this RFP, the information contained herein is supplied solely as a guideline for Proponents. The information is not guaranteed or warranted to be accurate by the NWC, nor is it necessarily comprehensive or exhaustive. Nothing in this RFP is intended to relieve Proponents from forming their own opinions and conclusions with respect to the matters addressed in this RFP.

5.5 Modification of Terms

NWC reserves the right to modify the terms of this RFP at any time in its sole discretion. This includes the right to cancel this RFP at any time prior to entering into a Contract with the preferred Proponent.

5.6 Ownership of Proposals

All documents, including proposals, submitted by Proponents in response to this RFP become the property of the NWC. They will be received and held in confidence, subject to the provisions of the Freedom of Information Act.

5.7 Use of Request for Proposal

This RFP or any portion thereof may not be used for any purpose other than the submission of proposals.

5.8 Confidentiality of Information

Information pertaining to the NWC obtained by the Proponent as a result of participation in this capital financing project is confidential and must not be disclosed without written authorization from the NWC.

5.9 Liability

Notwithstanding any other provision of this Request for Proposal, it is expressly understood and agreed that *NWC* will not and shall not under any circumstances whatsoever, including without limitation whether pursuant to contract, tort, statutory duty, law, equity or otherwise, and including but not limited to any actual or implied duty of fairness, be responsible or liable for any costs, expenses, claims, losses, damages or liabilities (collectively and individually "Claims") incurred or suffered by a Proponent as a result of, arising out of or related to the RFP, any error or omission in any part of the RFP, the preparation, negotiation, acceptance or rejection of any proposal, the rejection of any Proponent, the cancellation, suspension or termination of the RFP, or the postponement, suspension or cancellation of the Project, and further, the Proponent hereby waives and releases *NWC* from and against any and all such Claims.

Without limiting the generality of the foregoing, it is expressly understood and agreed that *NWC* shall not be under any obligation whatsoever to enter into a Contract with a Proponent or anyone else and may cancel the RFP at any time for whatever reasons *NWC* in its sole, absolute and unfettered discretion considers to be in its best interest.

6. Background Information on the K-factor Financing Plan

6.1 Overview

The attached Term Sheet (Appendix B) provides the general terms and conditions of the proposed Loan.

The Loan is structured to allow the NWC to implement a series of capital improvements identified in the OUR Determination Notice funded by K-factor collections.

The loan will be issued pursuant to authority conferred by _____.

The loan is authorized by NWC Board Decision No. _____, adopted on _____.

Under the terms of the NWC Charter, the NWC is authorized to pledge its revenues, the pledge is valid and binding from the time the pledge is made, and revenues so pledged are immediately subject to the lien of such pledge without physical delivery, filing or other act and the lien of such pledge is superior to all other claims and liens of any kind whatsoever.

NWC Counsel should check to make sure the statement above is a correct reading of the NWC Charter and local law

6.2 K-factor Revenues

A K-factor was first introduced in February 1999 to help fund the replacement of meters and pumps as part of a rehabilitation program. The funds were collected via the monthly billing. The K-factor was fixed as 4% of the sum of the customers' bills and these funds were placed in a separate account to fund the designated programs. The funds were also audited to ensure that all expenditure was accounted for and that there was full accountability for the use of the funds. The funds were not available to be used to fund capital expansion programs. The execution of the program was successful and achieved the intended results. Essentially, the K-factor can only be used to fund capital rehabilitation programs or capital works that will not yield any significant increase in revenues for the NWC but is required to comply with a specific regulatory direction.

Based on the experience of the previous K-factor program, the OUR established a new K-factor financing program as part of its April 28, 2008 Determination Notice.

Under the terms of the OUR Determination Notice, all K-factor revenues collected by the NWC shall be placed in a special account and held only for the implementation of specific capital improvement projects.

Projected K-factor collections and X-factor payments based on conservative estimates are as follows:

Year	1	2	3	4	5	6	7	8	9	10	11	12
	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
K-factor Rate	14%	20%	23%	25%	27%	27%	27%	26%	26%	24%	24%	23%
X-factor Rate	5%	10%	10%	12%	12%	13%	15%	18%	22%	22%	23%	23%
Net K - factor Rate	13%	18%	21%	22%	24%	23%	23%	21%	20%	19%	18%	18%

Year	1	2	3	4	5	6	7	8	9	10	11	12
	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
Projected K Factor Billing for J\$	\$1.8 billion	\$2.5 billion	\$2.99 billion	\$3.27 billion	\$3.6 billion	\$3.7 billion	\$3.7 billion	\$3.6 billion	\$3.5 billion	\$3.3 billion	\$3.4 billion	\$3.3 billion
Projected K Factor Billing US\$	\$20 million	\$28 million	\$33 million	\$36.3 million	\$40.4 million	\$41.1 million	\$41.4 million	\$39.6 million	\$38.8 million	\$36.9 million	\$37.5 million	\$37 million

The OUR also determined that the schedule of K-factor and X-factor shall continue across tariff regimes to ensure funds are available to service the loans. Notwithstanding the above, the OUR may make adjustments to the schedule at subsequent rate reviews to properly align cash inflows with financing requirements

6.3 Debt Service Reserve Account

To credit enhance the Loan, a DSRA will be established and funded at 125% of the average annual amount of principal, interest and premium, if any, required to be paid during all Fiscal Years in which the Loan will be outstanding calculated as of the date of issuance. The DSRA will be pledged to the Lender.

6.4 CReW Debt Service Reserve Account

The Inter-American Development Bank (IDB) in conjunction with the Global Environment Facility (GEF) has established the Caribbean Regional Fund for Wastewater Management (CReW) to support the implementation of wastewater projects in the region. The IDB is prepared to provide the NWC will a US\$2 million grant/endowment to facilitate the K-factor financing program. Funds from the IDB will be placed in a special CReW Debt Service Reserve Account and pledged to the Lender.

As a grant/endowment, NWC will not be obligated to repay the CReW, IDB or GEF for these funds. At the termination of all outstanding loans supported by the CReW DSRA, the CReW funds will be transferred to the NWC under an agreement between IDB and the NWC. The CReW funds will be invested in highly secure, liquid securities and income earned will remain in the CReW DSRA.

6.5 Additional Debt Test

The NWC shall have the authority under the Loan Agreement to issue parity obligations to provide funds for any K-factor investment projects as defined by the OUR Notice of Determination, but only if no Event of Default has occurred and is continuing, there is no deficiency in the Loan Revenue Account, the balance in the Loan Reserve Account is at least equal to the Reserve Requirement, and there has been filed with the NWC either:

1. A certificate of the President of the NWC stating that net K-factor revenues for the Base Period were not less than one hundred twenty-five percent (125%) of the

average annual debt service on all K-factor Loans, with the proposed Parity Obligations treated as outstanding; or,

2. A certificate or opinion of a qualified consultant stating that the adjusted net K-factor revenues are at least one hundred twenty-five percent (125%) of the average annual debt service on all outstanding K-factor loans, with the proposed Parity Loan treated as outstanding

The first lender is protected by the additional debt test because it prevents the NWC from taking out additional K-factor loans unless there are sufficient K-factor revenue collections **in hand** to meet the debt service reserve account requirements of the existing and proposed new loan. The additional debt test protects the first lender from dilution of its financial interest while allowing all subsequent lenders equal access to pledged revenues for loan repayment.

These provisions are commonly used in the U.S. regarding the financing of municipal water utilities and have been well received by investors in the U.S. capital markets.

7. Background Information on NWC

7.1 Overview

National Water Commission (NWC) is the sole commercial provider of water and sewerage services in Jamaica, with the exception of a few very small systems operated by the private sector or at the local government level. The NWC is the only major utility company in Jamaica that is still wholly owned by the people of Jamaica. The utility operates throughout the island and is the designated primary vehicle for the achievement of the country's policy objectives of providing potable water supply to all Jamaicans by 2010 and fully operational central sewerage systems for all major towns by 2020.

The utility is also engaged in the provision of potable water and sewerage infrastructure to support economic and social development, especially in respect of relevant areas targeted by the Government's development policies. Tourism and housing developments are two of the key sectors in focus.

7.2 Ownership Structure and Governance

NWC is fully owned by the Government of Jamaica of Jamaica. Its management reports to a board of directors which consist of nine members appointed by the Minister with responsibility for water.

7.3 Legal and Regulatory Framework

NWC operates under the NWC Act of 2004. Under this Act NWC has the power to:

Acquire, hold and dispose of property, to enter into contracts, to sue and be sued in its said name and to do all things necessary for the purposes of this Act: Provided that, during the subsistence of a guarantee given under section 9, the Commission shall not alienate, mortgage, charge or demise any of its immovable property without the approval of the Minister responsible for finance.

NWC is regulated by the Office of Utilities Regulation (OUR) which was established by virtue of the OUR Act of 1995, amended in the year 2000. The OUR is responsible for setting tariffs and service standards.

7.4 Organizational Structure

The organizational structure of NWC is shown below. The utility is headed by a President supported by a number of vice presidents.

7.5 Technical Operations

7.5.1 Water Supply Systems

NWC does not have monopoly rights for the provision of water and sewerage services. Other government agencies as well as the private sector have been involved in the provision of these services; the Government has a policy which encourages further participation by the private sector. However, these entities have much less investment in water and sewerage infrastructure.

NWC operates some 460 water supply systems, comprising water treatment plants, wells, entombments and booster/re-lift stations. These provide potable water services throughout the island and are available in most areas via in-house taps, stand pipes and bulk supply points. NWC produces some 5.4 billion gallons of water per month through a network of some 9,000 kilometers of pipeline to just over 70% of the population.

7.5.2 Wastewater Collection and Treatment Systems

NWC operates 68 wastewater treatment plants. Most of these plants are small and are associated with housing developments. A number of these facilities require extensive refurbishing while others need to be replaced.

NWC prepared a Wastewater Sewerage Action Plan, following consultation with the National Environment and Planning Agency (NEPA), outlining NWC plans to carry out refurbishing and replacement of some of these wastewater plants.

7.6 Financial Statements

The following are included:

- Annual reports, including audited financial statements, for the years 2005/06 and 2006/07.
- Audited financial statements for 2007/08.
- Management accounts for the months April 2008 to July 2008, the first four months of the current financial year.
- Recent K-factor reports filed with the OUR

8. Project Information

8.1 Project Purpose

To finance rehabilitation of wastewater treatment facilities and construction of selected collection systems for the Soapberry wastewater treatment plant as identified in 8.3 below.

8.2 Stakeholders Involved

The key stakeholders are:

- National Water Commission – which has direct responsibility for the provision of adequate water supply to the service areas in the most efficient manner;
- Government of Jamaica primarily by way of the Ministry of Water and Housing, the Ministry of Finance and Planning and the local government agencies;
- Real estate developers – who require available water supplies to support their developments;
- Economic interests – including hotels and other commercial and industrial entities in the service areas;
- Residents in the service areas;
- The contractor selected for implementation of the project.

8.3 Project Scope and Cost

The Project will include the following capital components.

No.	Location	Project - WWTP	Type of Treatment Technology	Capacity in MIGD	Budget in JM\$	Project Scope
Category A.1.1. – Design Build Projects						
1	KSA	Elleston Flats	Contact Stabilization	0.24	44.00	A total rehabilitation of WWTP will be required. Including the rehabilitation and recommissioning of the reactor tank which is now idle. There is a high demand for sewerage services in this area.
2	St. Catherine	Ensom City	Extended Aeration	0.84	6.00	Rehabilitation of the WWTP is underway.
3	St. Catherine	De La Vega City	Wastewater Stabilization Pond	0.35	25.00	Major capital expenditure will be required. Reestablishment of the influent pipe spanning the Rio Cobre River to the stabilisation ponds & upgrading to pumping station with rehabilitation of the sump and grounds will be required.

No.	Location	Project - WWTP	Type of Treatment Technology	Capacity in MIGD	Budget in JM\$	Project Scope
4	St. Thomas	Yallahs Ponds	Wastewater Stabilization Pond	0.06	50.00	The WWTP was extensively damaged and is to be reconstructed. No available land to facilitate reconstruction. NHT to be consulted on the capacity of their plant for the possibility of a direct connection which is within close vicinity/proximity to the NWC's facility. An alternative option will be the procurement and installation of a portable plant.
5	Clarendon	Longville	Aerated Lagoon	0.600	11.80	TBD
6	Clarendon	Mineral Heights	Oxidation Ditch	0.339	20.00	TBD
7	St. Catherine	Greater Portmore	Wastewater Stabilization Pond	4.000	40.00	TBD
8	St. Catherine	Ebony Vale	Aerated Lagoon	0.250	14.00	Engineering designs for WWTP is completed and are awaiting NEPA's approval.
			Subtotal		210.80	
Category A.1.2. – Traditional Design Bid Build						
1.0	Westmoreland	Negril Ponds	Waste Water Stabilization Pond -WSP	4.00	66.91	Tenders are currently being invited for the rehabilitation of this WWTP. The NWC contribution to the project is Euro 0.60 or JM\$66.91M
2.0	St. Catherine	Eltham Park	Oxidation Ditch	0.99	85.00	Engineering Designs are underway
3.0	St. Catherine	Twickenham Park	Extended Aeration	0.20	50.00	Construction of this WWTP is advanced. Construction is being undertaken by the National Housing Trust (NHT). However, the NWC will have to undertake works to decommission its existing WWTP and construct a new Pumping Station to have its flows diverted to the new WWTP.
			Subtotal		201.91	
GRAND TOTAL					412.71	

Appropriate development costs and contingencies have been included in the respective figures.

8.4 Implementation Strategy

The K-factor projects will be implemented on a design and build basis with performance incentives for the EPC Contractor.

8.5 Contractual Arrangements

The contractual arrangements to be put in place to facilitate implementation of the project include the following:

- Construction Contract for implementation of all the capital works

8.6 Operating and Maintenance Considerations

(To be developed)

8.7 Project Schedule

(To be developed)

8.8 Environmental Considerations

All necessary environmental approvals are expected to be obtained by the commencement of construction.

8.9 Approvals

The contractual arrangements are subject to approval by the National Contracts Committee and the Cabinet. Both of these have already given their preliminary approval, subject to finalization of the detailed contractual arrangements.

9. Evaluation Criteria

9.1 Objectives of this RFP

The primary objective of the RFP is to ensure that NWC obtains loan financing for the K-factor Projects on terms which are most favourable in terms of all in lifecycle cost and repayment term. Other objectives include:

- Limited Recourse Provisions
- Flexible Loan Arrangements
- Reasonable Reporting Requirements
- Reasonable Covenant and Security Provisions
- Innovative Alternative Financing Solutions

9.2 Mandatory Criteria

The following are mandatory requirements. Proposals not clearly demonstrating that they meet them may not receive any further consideration during the evaluation process.

Mandatory Criteria
a) The proposal must be received at the closing location by the specified closing date and time, as per section 3.4 of the RFP.
b) Three copies of the proposal must be submitted (not by <i>facsimile or electronic mail</i>).
c) The proposal must be formally signed, authorized and binding on the Proponent (must have prior internal credit approval).
d) There must be confirmation of eligibility and no conflict of interest.
e) There must be acceptability of Form of Contract as per section 5.3 of the RFP.

9.3 Desirable Criteria

Proposals meeting the mandatory requirements will be further assessed against the following set or subset of desirable criteria as applicable.

Desirable Criteria
Experience and Capabilities
Financing experience relevant to the Project
Experience in public sector project financing
Security and covenant requirements, terms and conditions, reporting, and other contract provisions
Innovative ideas and solutions
Service levels (accessibility, easy of process)
Quality of proposal (thoroughness/organization)
Financing Costs, Terms and Conditions
Interest Rates

Desirable Criteria
Ancillary fees (Commitment fee, Administration, etc.)
Other related expenses
Repayment/amortization terms
Security
Availability and timing requirements for drawn-down

10. Responsiveness of Proposals

In order to receive full consideration during evaluation, proposals should include the following:

10.1 To Meet Mandatory Criteria

Proposals must meet the mandatory criteria presented in Section 9.1. Proposals meeting the mandatory requirements will be further assessed against the desirable criteria presented in Section 9.2 as follows:

10.2 To Meet Desirable Criteria

a. Proposals will be evaluated based on Proponents' financing capabilities and experience as presented in the proposals. Proponents should demonstrate how their proposals meet the desirable criteria set out in Section 9.2 of this RFP. Proponents should clearly identify the following in their proposal and their Capital Financing Term Sheet(s):

- The organizational profile of the Proponent;
- Any recent and relevant assignments (provide overview);
- A comprehensive proposal for the Capital Financing of the Project and a complete explanation of how the proposal and alternatives presented, if any, would meet the objectives of this RFP;
- A detailed list of the security and covenant requirements, terms and conditions of the proposed Capital Financing.

b. Interest rates/ and fees presented in the proposals will be evaluated. Proponents should provide full details as follows:

- Fixed and floating interest rates, each with and without a Sovereign Guarantee;
- The amount of ancillary fees, if any (Commitment fee, 1 legal, administration, etc);

- The method and frequency of payments.

11. Format of Proposal

The following format and sequence should be followed in order to provide consistency in proposals and ensure each proposal receives full consideration. All pages should be consecutively numbered.

- a. Proposal covering letter. Please use sample provided in Appendix A. An authorized officer of the Proponent must sign this letter.
- b. Title Page including the name of the Request for Proposal, closing date and time and Proponent's name, address, and contact person.
- c. Table of contents including page numbers.
- d. A short (one or two page) summary of the key features of the proposal.
- e. The Proponent's proposal detailing the Proponent's response to this Request for Proposal. The proposal must include the Proponent's Capital Financing Term Sheet, which shall be binding on the Proponent.
- f. A list of contact names and their telephone numbers in case further clarification is required.
- g. Appendices, including documents annual reports, financial statements, reference material and standard credit agreement.

RFP Appendix

Sample Proposal Cover Letter

Letterhead or Proponent's name and address

Date

National Water Commission

5th Floor, LOJ Building

28-48 Barbados Avenue

Kingston 5

Kingston

Jamaica, West Indies

Attention: Mr. Vernon Barrett

Dear Sir

Subject: ***Request for Proposal to Provide Capital Finance for K-factor projects***

The enclosed proposal is submitted in response to the above-referenced Request for Proposal. Unless specifically excluded in writing, through submission of this proposal we agree to all of the terms and conditions of the Request for Proposal.

We have carefully read and examined the Request for Proposal and have conducted such other investigations as were prudent and reasonable in preparing the proposal.

We agree to be bound by statements and representations made in this proposal and to any agreement resulting from the proposal.

Yours truly

Signature

Name:

Title:

Legal name of

Proponent:

Date:

RFP Appendix

Sample Receipt Confirmation Form

[To be completed and returned to NWC at the address below]

Project Title: Request for Proposal to Provide Capital Finance for K-factor projects.

Closing date: _____

COMPANY: _____

STREET ADDRESS: _____

_____ **POSTAL CODE:** _____

MAILING ADDRESS IF DIFFERENT: _____

_____ **POSTAL CODE:** _____

PHONE NUMBER: _____ **FAX NUMBER:** _____

CONTACT: _____

PERSON: _____

E-MAIL: _____

☐ **WE WILL BE SUBMITTING A PROPOSAL.**

☐ **WE WILL NOT BE SUBMITTING A PROPOSAL**

UNLESS IT CAN BE SENT BY FAX, FURTHER CORRESPONDENCE ABOUT THIS REQUEST FOR PROPOSAL SHOULD BE SENT BY:

☐ **COURIER COLLECT.**

PROVIDE COURIER NAME AND ACCOUNT NO: _____

☐ **MAIL**

☐ **E-MAIL**

SIGNATURE: _____

TITLE: _____

In order to receive further information about the Request for Proposal this form is to be returned to:

**National Water Commission
5th Floor, LOJ Building
28-48 Barbados Avenue
Kingston 5
Kingston
Jamaica, West Indies:
Fax: (876) 929 6285
Phone: (876) 919 0832
Attention: Mr. Vernon Barrett**

Annex D – Construction Schedule for First 11 Selected K-Factor Projects

			2010												2011												2012											
Item No.	Activities	Duration Weeks	Apr	May	Jun	Jul	Aug	Sep.	Oct	Nov.	Dec.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep.	Oct	Nov.	Dec.	Jan	Feb.	Mar	Apr	May	Jun	Jul	Aug	Sep.	Oct	Nov.	Dec.			
	Category 'A' WWTPs Projects for CReW Financing																																					
A.	CReW Projects - Category - 'A' Proposed WWTP Projects (Design & Build Contracts) WWTPs- Ensom City, Longville, Elleston Flats, De La Vaga City & Yallahs Ponds etc.)																																					
	Invitation of Tenders																																					
1.0	Public Invitation for Tenders (Design & Build Contract) for the rehabilitation of the WWTPs.	8																																				
2.0	Evaluation (including negotiation) of tenders	8																																				
3.0	Approvals (NEPA, NWC, Sector Committee of NCC, NCC, Cabinet)	36																																				
4.0	Mobilization and award of Design & Built Contract	4																																				
B.	Construction Phase																																					
5.0	Construction (including Designs & NEPA approval)	40																																				
C.	Post Construction (Defects Liability Period)																																					
6.0	Post Construction (Defects Liability Period)	24																																				
	Wastewater Treatment Plants - Implementation																																					
1.0	Negril Wastewater Stabilization Pond	I.T.																																				
2.0	Eltham Park Wastewater Treatment Plant	E.D																																				
3.0	Twickenham Park	CWIP																																				

3 National Wastewater Revolving Fund - Belize

3.1 Introduction

The CReW program in Belize focused on the urgent need to implement a regional sewage collection, treatment and disposal system for the Placencia Peninsula in Belize. A feasibility study for this project had been done by Engineers Without Borders (EWB) in 2006.

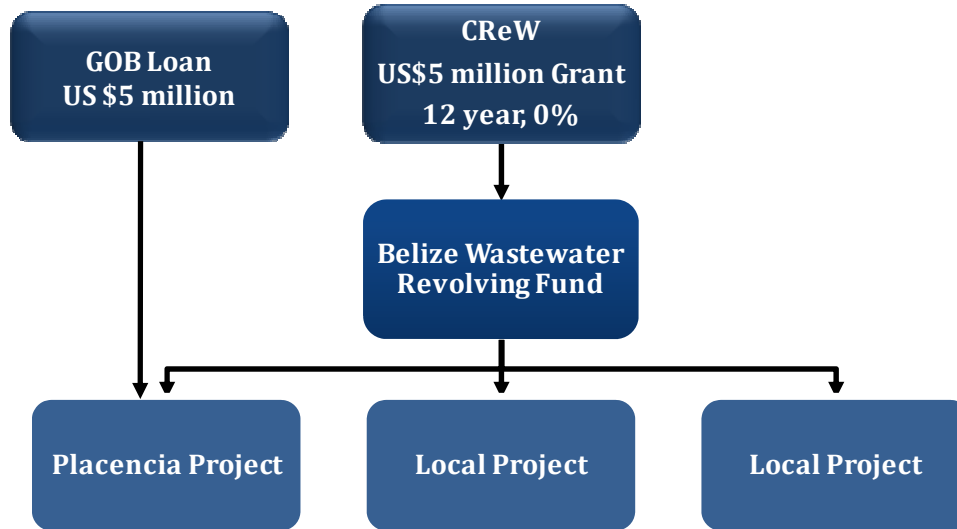
The Placencia Peninsula is located 40 miles south from Belize City. The Peninsula is a 16-mile long strip of land between the Caribbean Sea on the east and the Placencia lagoon on the west. Since the last decade, Placencia has been dedicated to the tourism industry, becoming one of the most popular destinations in all of Belize. The area is composed of two villages: Placencia Village and Seine Bight Village. Maya Beach, while officially part of Seine Bight, is locally considered to be a separate community. The current population stands at 3,000, but reaches up to 10,000 during peak tourist season. As a result of unplanned sewage disposal, the area is suffering from negative impacts of contamination of natural resources and creating increasing human health risks.

3.2 Financing Mechanism

3.2.1 Description

Over the last two years IDB has had extensive discussions with the Government of Belize (GOB), town council representatives, developers and other stakeholder on the various options for the structure of the financing mechanism. After the review of the various options and the assessment of the GOB's current financial situation, it was determined with the GOB that the CReW funds should be provided directly to the GOB as a capitalization grant for the BWRF. Under the terms of the CReW grant agreement, first use of BWRF would be dedicated to the Placencia project. This approach will remove any contingent sovereign debt issues, focus the GOB on the creation of the BWRF as a condition of the CReW grant, and provide flexibility in the implementation of other wastewater projects supported by the BWRF should the Placencia project fail to reach financial closure. A flow of funds for the Belize Wastewater Revolving Fund is provided in Figure 3-1.

Figure 3-1: Schematic of the Proposed Belize Wastewater Revolving Fund



3.2.2 Administration

The Ministry of Finance (MOF) is planned as the pilot executing agency for the revolving fund in Belize. As the pilot executing agency, the MOF will be required to manage the revolving fund in accordance with the operational guidelines outlined in Annex B and will be required to establish a project management unit to manage the projects for which the guarantee is being used to secure financing.

Under the proposed legislation, the Prime Minister would select a Board of Directors of the BWRF who will be vested with all necessary powers and authorities to implement the Fund's operations. The Prime Minister would be able to assign operational responsibilities to an existing GOB entity. These determinations would need to be made by the Prime Minister before the CReW grant agreement is executed.

3.2.3 Eligible Projects

Pursuant to the terms of the CReW grant agreement, eligible projects would include local wastewater projects that advance the goals of the Cartagena Convention and are located in a watershed area that drains into Caribbean coastal waters.

3.2.4 Exit Strategy

The CReW grant agreement will stipulate that grants funds be placed in a special BWRF account. All interest income earned on BWRF account and loan repayments would remain in the BWRF account for the grant period. Based on this evaluation, the GOB and IDB would decide to continue the BWRF as structured or terminate the BWRF and transfer all BWRF accounts and loan repayments to a government entity dedicated to wastewater treatment plant implementation.

3.2.5 Current Status

The development and implementation of the revolving fund is ongoing. The following activities related to the development of the revolving fund have been performed:

- Legislation to create the BWRF and operational guidelines for the Fund has been drafted. (See Annex A)
- Draft operations manual for the revolving fund has been drafted. (See Annex B)

3.2.6 Next Steps

Activities	Responsible Party	Deadline
Enact BWRF enabling legislation	GOB	TBD
GOB finalization of BWRF executing agency and appointment of Board	GOB	TBD
BWRF Board adopts operational guidelines	GOB	TBD
Execute Grant Agreement	GOB/IDB	TBD

3.3 First Generation of Projects

3.3.1 Overview

The first project to receive assistance from the BWRF will be the Placencia project. This project will consist of the development of a wastewater system for the Towns of Placencia and Seine Beight. A number of solutions were recommended based on the feasibility study developed by EWB. These recommendations also reflect the Belize Water Services Limited (BWSL) views on sewage conduction and disposal in the region. These recommendations include:

- Sewer system: The area has a high water table, which would imply that the sewer systems have the risk of high infiltration levels. This would result in high conduction, pumping and treatment costs and a considerable increase in the flood risks. The solution to address these concerns could include a pressurized sewer in order to avoid infiltration. This solution would reduce excavation and material costs and significantly reduce infiltration and flooding events.
- Treatment systems: Since the proposed site has limited space and can be ecologically fragile, it is imperative to choose a low footprint system with the lowest environmental impact (landscape, odors, noise, etc). It is also essential to choose a technology that is compatible with local knowledge and practices. Three solutions were proposed, which were:

- Package treatment plant
- Facultative and aerated lagoons
- Constructed wetlands

The Facultative and aerated lagoons were the final recommended treatment option based on the EWB study. The technology presents a good combination between the need for secondary treatment and the existing space limitations. If a final polishing unit is needed, the natural conditions of the area will facilitate the implementation of wetlands. This system will need low levels of disinfection since it has a long hydraulic and biological retention period. The energy requirements are low, which implies that the operation costs will be lower than other conventional treatment technology.

The existing cost estimates in the EWB study were not sufficiently detailed to determine accurate figures for capital expenditures (CAPEX) and operational expenditures (OPEX). However, given that the extent of the network and the type of treatment have been already identified, it was possible to estimate these figures. The CAPEX for covering the whole project, assuming full treatment, is between US\$ 6.0-9.0 million, assuming treatment using facultative and aerated lagoons with an annual OPEX is estimated between US\$ 350,000-500,000.

While the feasibility study prepared by EWB has provided very valuable information on the size and scope of the peninsula-wide project the cost projections are outdated and need to be revised. It was also determined that an alternative approach should be studied including a phased implementation approach. A study, which will be funded by the USTDA, will conduct a more in-depth analysis of the options, and technical and operational conditions. The Terms of Reference for this consultant service has been drafted. The study will (i) revalidate and/or update the feasibility study conducted by EWB; (ii) obtain a more accurate estimate of project costs and implementation program; (iii) provide an in-depth analysis of existing risks related to technical feasibility, environmental impacts and project costs. A copy of the USTDA TOR is included in Annex D.

Some of the conditions that will be incorporated into this analysis that were not considered previously are:

- Actual availability of proposed site
- Ecological and environmental conditions of the proposed site
- Consistency of the treatment process for BWSL with their other systems.

This project will be funded partially with funds through the CReW project (the treatment system), with **the rest of the project being financed through a US\$5 million IDB loan**, with the IDB guaranteed by the Government of Belize.

3.3.2 Current Status

The current status on the project is as follows:

- USTDA and GOB are finalizing the grant agreement, which should be signed by late August. Once the agreement is signed the services will be procured.
- IDB is current working on the a US\$5 million loan, which is expected to be presented to the Board for approval in December 2010.

3.3.3 Next Steps

Activities	Responsible Party	Deadline
Obtain USTDA approval for Belize study	USTDA/IDB	TBD
Complete USTDA feasibility study and shared it with GOB, Placencia local officials, and local developers.	USTDA	TBD
Continue discussions with local developers to determine their level of financial support.	IDB	TBD
Obtain GOB approval for universal connection requirement on the Placencia peninsula.		TBD
Resolve land issues relating to site of treatment facility		TBD
Contract for the design and construction of the wastewater treatment facility.	BWSL	TBD
Obtain Placencia and Seine Bight Village Council approval of CReW financing mechanism.	IDB	TBD
Finalize Inter-Municipal Agreement	IDB	TBD

3.4 Annexes

The following annexes are included for the credit enhancement facility:

- Annex A. Draft Belize Wastewater Revolving Fund Legislation
- Annex B. Draft Belize Wastewater Revolving Fund Operations Manual
- Annex C. Sample Inter-municipal Agreement for Cooperative Wastewater Management
- Annex D. USTDA Terms of Reference

Annex A – Draft Belize Wastewater Revolving Fund Legislation

BELIZE WASTEWATER REVOLVING FUND ARRANGEMENT OF SECTIONS

PART I

Preliminary

1. Short title and commencement.
2. Interpretation

PART II

Establishment and Objectives of the Fund

3. Establishment of Fund
4. Body Corporate
5. Objectives of the Fund
6. Functions of the Fund

PART III

Appointment of staff

7. Appointment of staff
8. Duties of the Executive Director

PART IV

Administration

9. Board of Directors
10. Composition of the Board
11. Meetings of the Board
12. Disqualifications to be a Director
13. Board to be protected by Public Authorities Protection Act
14. Delegation of powers
15. Protection of Directors
16. Rules of the Fund

PART V

Financial Provisions, Accounts and Reports

- 17. Revenues of the Fund
- 18. Expenses of the Fund
- 19. Borrowing Powers
- 20. Submission of Budget Estimates
- 21. Accounts and Audit
- 22. Annual Report

PART VI

Miscellaneous

- 23. Validity of acts
- 24. Exemption from taxes
- 25. Regulations

PART I

Preliminary

- 1.-(1) This Act may be cited as the Belize Wastewater Revolving Fund Act.
(2) This Act shall come into force on a date to be appointed by the Minister by Order published in the *Gazette*.
- 2. In this Act, unless the context otherwise requires-
“Board” means the Belize Wastewater Revolving Fund Board established under section 10;
“Executive Director” means the Executive Director appointed pursuant to section 7(1);
“Fund” means the Belize Wastewater Revolving Fund established under section 3;
“Government” means the Government of Belize;
“Minister” means the Minister for _____

PART II

Establishment and Objectives of the Fund

- 3.-(1) A body to be known as the Belize Wastewater Revolving Fund shall be and is hereby established as an autonomous institution governed by the provisions of this Act.
(2) The Fund may exercise any of the functions entrusted to it by or in accordance with the provisions of this Act or any regulations made thereunder and may exercise any other duties incidental or ancillary to, or consequential upon, the performance of its functions.
- 4.-(1) The Fund shall be a body corporate having perpetual succession and a common seal and subject to the provisions of this Act shall have power to acquire,

hold and dispose of movable and immovable property of whatever kind and to enter into contracts and to do all things necessary for the fulfillment of its objectives.

(2) The Fund may sue and be sued in its corporate name and shall for all purposes be described by that name.

(3) The seal of the Fund shall be authenticated by the signatures of the Chairman or the Executive Director and one other Director authorized by the Board of Directors to act for that purpose, and the seal thus authenticated shall be judicially and officially noticed.

(4) All documents made by the Fund, other than those required by law to be made under seal, shall be signified under the hand of the Chairman and the Executive Director or by a Director and the Executive Director.

(5) The Fund shall have its principal office in Belmopan or at such other place in Belize as the Board may decide.

(6) The Fund may establish regional or local offices in any location within Belize as it considers necessary.

5. The objectives of the Fund include the following:

(a) establishing an efficient, complementary and demand-driven mechanism for providing low costs, long-term financing of eligible wastewater projects in Belize;

(b) financing small-scale wastewater projects; and

(c) providing assistance for the environmental improvement of coastal water conditions

6.-(1) The Fund shall, subject to the availability of resources, approve projects and provide, either wholly or partially, financial and technical assistance to local government organizations, or public-private partnerships for the execution of such projects which will improve the environmental quality of coastal waters

(2) In approving a project under subsection 6 (1), the Board shall have regard to all relevant matters, including the following:

(a) the financial aspect of the proposed project;

(b) whether the proposed project can be undertaken expeditiously;

(c) the time required for the completion of the proposed project;

(d) co-financing provided by the loan applicant

(e) whether the proposed project has the capacity to demonstrate technical; environmental, institutional and economic viability according to established project approval criteria;

(f) number of households served relative of total project costs; and

(g) the operating costs in relation to the proposed project.

(3) The Board shall have the power to approve-

(i) the procedures and criteria for project selection, and the projects submitted for its consideration in accordance therewith;

(ii) the policies regarding the management of projects, and activities, and financial regulations and its tendering, procurement and disbursement procedures;

(iii) the budget; and

(iv) the rules prescribing the procedures of, including the quorum for, the meetings of the Fund, and the manner in which it will transact its business.

PART III

Appointment of Staff

7.-(1) The Board may, with the approval of the Minister, appoint and employ, at such remuneration and subject to such terms and conditions as it thinks fit, an Executive Director.

(2) The Board may appoint and employ at such remuneration and subject to such terms and conditions as it thinks fit, such other officers, employees and agents as it considers necessary for the proper performance of its functions.

8.-(1) The Executive Director shall, subject to the general policy decisions of the Board, be responsible for the management of the Fund including the organization of staff in accordance with the general terms and conditions of service established by the Board.

(2) The Executive Director shall have authority-

(a) to sign jointly with another Director, reports, balance sheets and other financial statements;

(b) to delegate his powers provided for in paragraph (a) of this subsection to other officers of the Fund.

PART IV

Administration

9. There shall be a Board of Directors of the Fund, appointed by the Minister which shall be constituted as provided in section 7, and the Board of Directors shall be the policy making organ of the Fund.

10. -(1) The Board of Directors shall consist of the following persons-

(a) a representative from the Ministry of Finance;

(b) a representative from the Ministry of _____;

(c) a representative from the Ministry of _____;

(d) a representative from the Ministry of _____;

(e) a representative selected from the private sector; and

(f) the Executive Director, *ex officio*, without a right to vote.

(2) The Directors referred to in subsection (1) above shall be appointed by the Minister for such period not exceeding two years as may be specified in the instruments appointing them: Provided that any such Director retiring on the expiration of his term of office shall, subject to section 12, be eligible for reappointment.

(3) The Minister shall appoint one of the Directors to be Chairman of the Board and the Chairman shall hold office for a period of two years and shall be eligible for reappointment.

(4) The Directors shall elect from their members a Deputy Chairman who shall hold office for a period of two years and he shall be eligible for reappointment.

(5) Where for any reason, the Chairman is unable to preside at any meeting of the Board:

(a) the Deputy Chairman shall preside if he is present; and

(b) if the Deputy Chairman is absent then the directors present shall elect one of their members to preside.

11.-(1) The Board of Directors shall meet as often as the business of the Board requires but not less frequently than once a year.

(2) The Chairman, or in his absence, the Deputy Chairman, shall summon a special meeting of the Board within seven days of a requisition for that purpose addressed to him in writing by any three Directors.

(3) A quorum for any meeting of the Board shall be four Directors, one of whom shall be the Executive Director.

(4) Decisions of the Board shall be by majority of the votes cast provided that in any case in which the voting is equal, the person presiding at the meeting shall have a second or casting vote.

(5) The Board shall employ the services of an official or other member of the staff as secretary and shall ensure that records are kept of its acts and decisions.

12.-(1) No person shall be appointed or remain a Director who is a member of the National Assembly.

(2) The Minister may terminate the appointment of the Chairman or any other Director only if the Chairman or such Director, as the case may be-

(a) by writing under his hand addressed to the person who selected him resigns his office;

(b) becomes subject to the disqualification specified in subsection (1);

(c) becomes bankrupt or insolvent, compounds with his creditors or benefits under the law for the relief of a bankrupt or makes any assignment in whole or in part of his income for the benefit of such creditors;

(d) is convicted of an offence involving dishonesty, or of any other offence punishable with not less than three years imprisonment (whether or not the convicted person is awarded such sentence);

(e) becomes totally or permanently incapable of performing his duties; and

(f) is guilty of gross misconduct

(3) The Minister may terminate the appointment of a Director of the Board who absents himself from three consecutive meetings of the Board without leave from the Board.

(4) The names of all members of the Board as first constituted, their terms of office and every change in the membership shall be published in the *Gazette*.

13. The Board shall be entitled to the same protection under the Public Authorities Protection Act as if it were included in the definition of 'Public Authority' given in section 2 of that Act, and the place at which the Board shall hold its meetings shall be deemed to be the "abode" of the Board within the meaning of that Act.

14.-(1) The Board may from time to time, in respect of any particular matter or class of matters, and in writing, delegate to any other Director or to the Executive Director, any of its functions under this Act except the following functions:

(a) approving annual budgets of activities;

(b) making regulations; and

(c) carrying out activities which require off-budget expenditures.

(2) Subject to any general directions given to him by the Board, the person to whom any powers are so delegated may exercise those powers in the same manner and with the same effect as if they had been conferred on him directly by this Act and not by delegation.

(3) Every person purporting to act pursuant to a delegation under this section shall, in the absence of proof to the contrary, be presumed to be acting in accordance with the terms of the delegation.

(4) Every delegation under this section shall be revocable at will, and no such delegation shall prevent the exercise of any power by the Board.

15. No Director shall be personally liable for any act of or omission of the Fund, or of the Board, or of any Director, or officer of the Fund, if the actor omission is made in good faith in the course of the operations of the Fund, or of the Board.

16.-(1) The Board may from time to time make rules of the Fund, not inconsistent with this Act, for all or any of the following purposes:

(a) regulating the proceedings of the Board;

(b) providing for the custody of the property of the Fund, and the custody and use of the common seal of the Fund;

(c) regulating the terms and conditions of employment of persons appointed under section 7;

(d) the preparation of semi-annual or quarterly audits of the Fund; and

(e) providing for such other matters as may be necessary or expedient for the better carrying out of the functions of the Fund.

(2) Notice in writing of every proposed resolution to make rules under this section or for the amendment or revocation of any rule so made, (including a copy of the proposed rules, amendment, or revocation) shall be given to every Director not less than 21 days before the meeting at which the proposal is to be moved, but an inadvertent failure to comply with this subsection shall not invalidate the making, amendment, or revocation of any rule at that meeting.

PART V

Financial Provisions, Accounts and Reports

17. The revenues of the Fund shall consist of the following-

(a) loans or grants from international financial or funding agencies;

(b) revenues allocated from the Consolidated Revenue Fund; and

(c) any other money lawfully contributed, donated, or bequeathed to the Fund or received by the Fund from any other source.

18. The expenses of the Fund, including the remuneration of members and staff thereof, shall be paid out of the funds and resources of the Fund.

19.-(1) Subject to the provisions of subsection (2), the Fund may borrow money required by it for meeting any of its obligations or discharging any of its functions.

(2) The power of the Fund to borrow in excess of such limits as the Minister responsible for finance may fix from time to time shall be exercisable only with the approval of the Minister responsible for finance as to the amount, source of borrowing and the terms on which the borrowing may be effected, and an approval given for the purposes of this subsection may be general or limited to a particular borrowing or otherwise, and may be either unconditional or subject to conditions.

20.-(1) The Fund shall, in such form and by such dates as may be prescribed by the Financial Secretary, prepare and submit to the Minister, estimates of income receivable and the expenditure to be incurred during each financial year (including

any supplementary estimates), and the Minister shall present the said estimates to the National Assembly with such amendments, if any, as he may consider necessary.

(2) Except with the approval of the Minister, no further sum shall be expended in any financial year other than that provided in the estimates relating to such financial year.

21.-(1) The Fund shall keep accounts and other records in relation to its business and shall prepare annually a statement of accounts in a form satisfactory to the Minister, being a form which shall conform to the best commercial and accounting standards.

(2) The accounts of the Fund shall be audited annually by an auditor appointed in each year by the Board with the approval of the Minister.

22.-(1) Within four months after the end of each financial year, the Fund shall cause to be made and shall submit to the Minister -

(a) a statement of its accounts audited in accordance with section 21 (2); and

(b) a report dealing generally with the proceedings and policies of the Fund during that financial year.

(2) The Minister shall cause a copy of such report together with the annual statement of accounts and the auditor's report thereon to be tabled in the National Assembly.

PART VI

Miscellaneous

23. No act done or proceeding taken under this Act shall be questioned or invalidated on the ground -

(a) of the existence of any vacancy in the membership, or of any defect in the constitution of the Board; or

(b) of any omission, defect or irregularity.

24.-(1) The Fund shall be exempt from the payment of income tax and property tax.

(2) All instruments executed by or on behalf of the Fund shall be exempt from stamp duty.

25.-(1) The Board may, with the approval of the Minister, make such regulations as it may consider necessary or expedient for the better carrying out of the provisions of this Act.

(2) Without prejudice to the generality of subsection (1) above, such regulations may provide for all or any of the following:

(a) maximum amounts which may be disbursed from the Fund for any type of project or activity; and

(b) the form of community equity participation in development projects financed by the Fund.

Annex B – Draft Belize Wastewater Revolving Fund Operations Manual

This Operations Manual (OM) describes the objectives, structure, and procedures of the BWRf program to remain in effect during the life of the IDB/CReW Grant Agreement with the Government of Belize (GOB). It outlines how the BWRf will conduct business and comply with the basic tenets of the IDB/CReW program, including schedules for review by and reporting to IDB and the Global Environment Facility (GEF).

General Eligibility. The BWRf programs may provide assistance to all publicly- and privately-owned community water systems or nonprofit water systems. Nonprofit systems may include school systems, day care centers, churches, or retreat centers.

General Project Categories. BWRf assistance is provided for projects that address a current violation or will prevent a future violation of wastewater discharge standards as established by the GOB and reduce untreated wastewater discharge into coastal waters.

Consolidation of Supplies. Consolidation projects refer to the consolidation of wastewater systems when a system can no longer maintain compliance due to a lack of proper technical, financial, or managerial capacity.

Creation of New Systems. BWRf programs may fund the development of new wastewater systems to address current public health concerns or consolidate existing systems that face technical, financial, or managerial capacity challenges. Projects that authorize the creation of a new system are limited to the specific geographic area affected by contamination as determined by the appropriate GOB government agency. Projects to consolidate multiple facilities are limited to the current service areas for wastewater systems. For all consolidation projects, applicants must ensure that consolidated systems will maintain compliance with all BWRf requirements.

Project Requirements. When funding these types of projects, the BWRf must determine that the applicants has provided sufficient public notice, considered alternative solutions, and is implementing the most appropriate and least-cost effective solutions. All projects shall be demand-led and must have the written sponsorship of the local government or private sector borrower. All projects shall be subject to a sit visit by BWRf staff or a qualified consultant to verify that the selection criteria are met, or otherwise, and report their findings to the meeting of the full BWRf Board.

Eligible Project-Related Costs. The BWRf may also fund some types of additional costs necessary to fully implement an eligible project. These additional costs must fall within one of the following categories:

- Costs for land acquisition that are integral to project implementation,

- Costs related to project planning, design, and other pre-project costs, and
- Costs related to system restructuring activities

Technical, Financial, and Managerial Review (TFM). BWRF loan recipients must pass a full TFM review. In addition to demonstrating that the system can maintain compliance based on technical and managerial activities, they must also demonstrate an acceptable level of financial management, including the ability to repay the BWRF loan and maintain acceptable facility operations. If a system does not have adequate TFM capacity, they may only qualify for assistance if the assistance will target a specific area of noncompliance or if the system agrees to develop a formal plan to make the appropriate changes necessary to improve compliance. In some cases, it may be determined that the project is not ready to proceed. In those instances, BWRF should provide available and appropriate technical assistance to resolve identified TFM issues.

Environmental Review Procedures General Requirements. All projects receiving assistance through the BWRF must pass an environmental review to evaluate possible negative environmental outcomes as a direct result of project assistance. The BWRF must conduct this review on all projects receiving BWRF assistance unless the activities solely involve administration (e.g., personnel, equipment) or technical assistance.

Financial Assessment of Program Recipients. Prior to awarding a loan for project assistance, the BWRF program must perform an assessment of all potential borrowers to ensure creditworthiness. This process may be conducted by BWRF staff or conduct these reviews with the assistance of local financial institutions, such as banks, or with the help of outside contractors. Each borrower must demonstrate adequate revenue or security to repay a BWRF loan. The evaluation of creditworthiness is used to ensure both public and private borrowers maintain sound financial management and possess the ability to repay a BWRF loan.

Public Borrowers: Approving a Dedicated Repayment Source. When working with public borrowers, BWRF staff may review audited financial statements and discuss types of revenue sources the entity may dedicate to the repayment of a BWRF loan. For example, revenue sources may include a pledge of additional revenues collected through user fees. Public systems must also demonstrate the appropriate ability to collect revenue according to Belize law and/or local ordinances. The BWRF may require a priority mortgage and/or lien position on the assets financed with the BWRF loan proceeds.

Private Borrowers: Establishing Adequate Security. Working with private borrowers often requires more creativity on the part of BWRF staff in determining creditworthiness and financial capability for loan repayment. Private borrowers may include privately-owned community or nonprofit non-community wastewater systems. When working with private borrowers, BWRF will be required to ensure the recipient of BWRF assistance has adequate security for a BWRF loan. For example, BWRF staff may review income tax statements when audited financials are not available. When adequate security cannot be easily established (e.g., through

company assets or other revenue sources), BWRP programs may require unique collateral arrangements or may explore other options in credit enhancement for the applicant. The BWRP may use several types of collateral arrangements, including the establishment of a debt payment reserve or requiring the purchase of insurance to guaranty loan repayment. BWRP may approve both corporate and personal guarantees of the loan recipient.

Establishing Loan Term. The BWRP shall have the flexibility to offer a wide variety of assistance types and establish unique borrowing provisions for loan agreements. BWRP shall have the ability to set unique interest rates, offer various repayment terms, and assess fees on BWRP borrowers. These types of decisions may affect the growth or ability of the BWRP to provide future project assistance and require a sound approach to financial planning. The BWRP will have the responsibility to balance decisions and adjust loan terms to provide a beneficial subsidy to the borrowing community and to ensure the continued health of the BWRP. For example, a lower interest rate may provide a greater incentive to the individual borrower in the near time, but it will reduce the future income available to the BWRP for additional loans.

Setting the Loan Interest Rate. The responsibility for establishing the effective market rate lies with the BWRP. Any method used to define the current market rate must be defined in the annual report. In addition, when considering rates for loan recipients, the BWRP should not set effective interest rates at a level that may cause the recipient to fail to meet any technical, financial, or managerial capability requirements. In addition, when assessing fees, the BWRP must ensure the effective loan rate (i.e., the loan interest rate, plus assessed borrowing fees) does not exceed the current market rate.

Setting the Repayment Schedule. In addition to establishing loan interest rates for individual borrowers, the BWRP must establish a formal loan repayment schedule in the final loan agreement. Loan repayments to the BWRP program must start within one year of project initiation of operations or when the project is capable of being initiated. In cases where a possible delay in project completion is expected, the BWRP may require the borrower to begin repayment within one year of the estimated date of completion. The BWRP must receive loan repayments on at least an annual basis, although loans may require repayments on a semi-annual or more frequent schedule. After the loan repayment period begins, borrowers must complete all repayments within twenty-five years for standard loans but may extend the term to thirty years (as determined by BWRP) for loans to disadvantaged communities. When providing an extended repayment period to a disadvantaged community, the BWRP must consider how a longer or delayed repayment period may decrease the capacity of the BWRP in providing additional assistance.

Setting Repayment Levels. Loan repayments are not required to equal any particular amount. The BWRP may authorize a “balloon repayment” or escalating repayment schedules for BWRP loans. In these cases, the borrower is required to provide higher annual repayment amounts in later years in contrast to lower repayment amounts in the earlier years. Similarly, programs may also allow

borrowers to provide interest-only payments for a set period of time, with higher annual repayment amounts in later years. For all BWRP loans that include interest-only or “balloon repayment” options, the BWRP must provide a discussion of the method for calculating this repayment schedule. The BWRP should recognize the potential negative effects, including an increase in the possibility of borrower default during the later years of loan repayment or the decreased capacity of the BWRP to provide program assistance in the current years.

Determination of Fees. In addition to establishing loan repayment terms and interest rates, the BWRP has the authority to assess additional fees on program borrowers. These charges may include fees assessed annually (e.g., loan maintenance fees) or an assessment of a one-time fee during the loan closing process. Fees may be used for two purposes; funding additional BWRP loans or for BWRP administration activities. The BWRP must document all planned and actual fee activity in the annual report. BWRP may require loan recipients to pay fees directly or allow the recipient to include these charges as part of the loan principal amount. The method of assessing and collecting fees will determine how and for what purposes programs may use BWRP fee revenue. In all cases, fees and interest on fees must return to the BWRP.

Fees Included as a Portion of the Loan Principal. Fees included as a portion of loan principal should return directly to the BWRP. Fees paid directly by the assistance recipient and deposited to the Fund may be used for all eligible BWRP activities, including additional project assistance.

Project Loan Agreements. Following the establishment and mutual acceptance of all loan terms, the BWRP will draft a formal project loan agreement. This agreement shall contain all requirements of assistance from the BWRP program, including the loan interest rate, the loan repayment term, and any applicable loan origination or annual fees. Both the program recipient and the BWRP program office must sign this agreement to ensure all terms are legally binding. A signed loan agreement becomes the formal contract between program borrower and the BWRP. According to a final project loan agreement, project assistance is only provided after the formal loan agreement is finalized and signed by both parties. According to this contract, the BWRP assistance recipient promises to complete the project according to schedule and approved specifications, while the BWRP program office agrees to provide funding assistance on a reimbursable cost basis or approved alternative method.

Project Performance Certification The BWRP shall require all project borrowers to designate a certified project engineer to provide continuous oversight and verification that the project is constructed according to design specifications. Periodic engineering reports are collected by the BWRP program to verify progress according to the original construction schedule agreed to in the final loan agreement. Additionally, the borrower-designated engineer will accompany the BWRP project engineer during formal onsite construction inspections. If a system fails to adhere to the original project completion schedule, fails to meet ongoing compliance provision in the BWRP loan, or fails to show appropriate technical, financial, or managerial capacity, the BWRP is required to enforce remediation requirements. To ensure that

assistance recipients take the steps necessary to maintain compliance, the BWRP may require the adoption of a formal Corrective Action Plan or require a revision to the original construction schedule.

Project Inspections. The BWRP shall use formal onsite inspections of the project site to verify that construction activities are completed in a timely manner, as detailed in the original loan agreement, and according to the original design specifications. The BWRP is required to ensure loan recipients are using BWRP funding for eligible purposes and to lend additional verification for all disbursement requests. The frequency and complexity of formal project inspections may vary project to project. The BWRP may conduct monthly project inspections, or only two inspections of the project site – one after fifty percent of the funds have been released to the borrower and another after construction is complete and before the last cash draw is completed for all remaining reimbursable costs. The BWRP may use in-house project engineers to complete inspections or may work with external field offices.

Onsite Construction Inspections. General activities conducted during a construction inspection include:

- 1) Adequacy of engineering supervision;
- 2) Oversight by wastewater system;
- 3) Availability of construction drawings;
- 4) Compliance with the construction schedule;
- 5) Availability of accounting records;
- 6) Actual payment requests versus payment schedules; and
- 7) Use of appropriate construction practices.

Approving Requests for Reimbursement. The BWRP is required to verify all loan payments and construction reimbursements for eligible program costs only. The general process for approving a BWRP loan disbursement requires an initial review of all invoices and accompanying documentation. After BWRP staff checks to ensure the disbursement request is for an active borrower, an active project, and that the borrower is not in significant noncompliance, the BWRP staff must verify that the funds requested are within the limits set according to the loan agreement. If the level of detail contained within an individual disbursement request is insufficient to allow BWRP staff to verify the release of BWRP funds, the BWRP may request the applicant to submit additional documentation. The BWRP can involve technical staff directly involved in construction inspections to help verify individual disbursement requests. Technical staff can provide additional information on project-approved change orders, work completed since prior inspection, and knowledge of any observed deficiencies. This information can help BWRP program staff to accurately approve individual requests for reimbursement.

Project Completion and Close-Out Final Construction Inspection. After project construction is complete and before final reimbursement funds are released to the borrower, a final construction inspection must be completed. This final inspection is carried out to ensure BWRP funds have been used for eligible purposes and the project is complete according to original plans and specifications and all BWRP

approved change orders. The BWRF staff engineer will complete this final onsite inspection in combination with the borrower-designated project engineer.

Releasing Final Project Funds. Following a final construction review, the loan recipient is provided with all remaining project disbursements according to approved project disbursement requests. The BWRF will hold five percent of remaining loan funds pending final inspection. The purpose of withholding some funds before final verification is to encourage timely completion of the project and initiation of operations.

General Timing and Requirements for Loan Repayment Initiating Loan Repayments. After a project is complete and has initiated operations, the loan recipient is required to begin repayments within one year. All borrower repayments must return to the BWRF (both principal and interest amounts), and all repayments must return within twenty-five years.

Annual Reports The BWRF must submit an Annual Report detailing the BWRF's performance and its compliance with BWRF regulations and IDB/CReW grant requirements. The Annual Report should document the actual activity of the BWRF for the prior year, and describe the BWRF progress toward short term and long-term goals. Reporting also includes detailing the timely and expeditious use of funds, binding commitments and loans executed, and all types of assistance provided. Specifically, the BWRF must demonstrate that it has provided funding to projects consistent with these operational guidelines and it adhered to the IDB/CReW Grant Agreement terms. In addition, the Annual Report should include financial statements and an overall assessment of the financial health of the BWRF.

In addition to demonstrating compliance, the report needs to show which projects satisfy various GOB requirements. The annual report should demonstrate compliance with the specific assurances as stated within the IDB/CReW Grant Agreement. Most importantly, all costs incurred must be eligible for BWRF assistance. The BWRF annual report should illustrate the public health benefits for its activities and progress in achieving outputs and outcomes. In addition to these regular components, the report should also follow-up on previous Annual Report findings and evaluates and other program changes. Reporting requirements will continue to exist along as the BWRF operates.

GEF Mid-term and Final Reports. The BWRF shall work with selected CReW consultants in the preparation of GEF mid-term and final evaluation reports as mentioned in the CReW/IDB Grant Agreement.

Use of the BWRF Performance Indicators. The Annual report shall contain five performance indicator calculations to give the BWRF, the GOB, IDB and GEF a means to track Fund progress and explore initial assessments of overall Fund health. Information should be collected for the following types of performance indicators:

- Return on IDB/CReW investment;
- Assistance provided as a percent of funds available;
- Disbursements as a percent of assistance provided;

- Additional assistance provided due to leveraging; and
- Net return on contributed capital.

Responsibilities of the BWRP Executive Director (ED). The Executive Director will head the BWRP and will be an ex officio member and Secretary of the BWRP Board of Directors. The Executive Director will hold ultimate responsibility for managing project resources and all BWRP staff and supervise the implementation of all projects. The ED shall be responsible for cost control and observation of relevant standards and policies of the BWRP. Specific responsibilities include:

- 1) Reporting to the BWRP Board through its Chairperson and attending all BWRP Board meetings;
- 2) Preparing minutes of BWRP Board meetings, distributing to relevant local stakeholders;
- 3) Evaluating the performance of the staff of the BWRP and reporting to the Board;
- 4) Maintaining a register of all project requests received by the BWRP for reporting to the next scheduled meeting of the BWRP Board;
- 5) Maintaining and update a register of technical consultants and contractors;
- 6) Submitting annual Fund Performance Reports on project implementation to the BWRP Board. These reports will consist of information on the capital cost and expenditure for each project, and actual employment generated by each project;
- 7) Coordinating activities for submission to IDB and GEF of documentation to satisfy the conditions precedent of the Grant Agreement;
- 8) Developing the Annual Work Plan and Budget for the BWRP and presenting the draft Annual Work Program and Budget annually to the BWRP Board;
- 9) Coordinating the preparation of project profiles for the approval by the BWRP Board;
- 10) Ensuring good governance practices, in compliance with IDB policies, in project contracting;
- 11) Monitoring and inspection of project activities;
- 12) Accepting completed projects and as-built drawings;
- 13) Reviewing and approving completed project maintenance plans for BWRP funded projects;
- 14) Accepting inception, interim and final Reports;
- 15) Recommending disbursements based on approved reports; and
- 16) Carrying out post-implementation monitoring of BWRP funded projects.

Qualification of Executive Director. The ED is expected to have at least a Bachelors degree and a minimum of five years experience in project management. Expertise in the management of water and wastewater projects and proficiency in computer skills are prerequisites. It would be advantageous if the ED has demonstrated competence in managing donor-funded programs and the ability to effectively communicate with community groups, Government officials, donors, and private sector representatives.

Annex C – Sample Intermunicipal Agreement for Cooperative Wastewater Management

This agreement is made between the Village of Placencia and the Village of Seine Bight under Belize General Laws, Chapter __, Section __, and other applicable laws.

RECITALS

Whereas the member Villages acknowledge that there is a critical need to eliminate, mitigate and prevent the adverse environmental and public health effects associated with the collection, processing and treatment of wastewater in the region from whatever source derived, including municipal, industrial, domestic, commercial and other sources;

Whereas the members desire to maintain full local authority and control over their wastewater management activities;

Whereas the members desire to reduce the costs to local taxpayers for wastewater management and to conduct their programs in the most cost effective manner; therefore the members desire to work cooperatively to reduce the costs of wastewater management in an environmentally safe manner;

Whereas the members wish to maximize their purchasing power by joining together for regional procurements relating to wastewater management;

Whereas the members each have the power to enter into this Agreement under applicable Belize law and Village Council votes duly adopted;

Now therefore the member Villages mutually acknowledge the receipt of good and valuable consideration for this Agreement, consisting of the mutual promises and covenants set forth herein, and enter into this agreement to evidence that they have agreed as follows:

ARTICLES OF AGREEMENT

Article 1 Placencia Peninsula Wastewater Treatment Authority

There is hereby established the Placencia Peninsula Wastewater Treatment Authority (hereinafter referred to as the “Authority”), which shall include Villages as named above which have adopted this Agreement by vote of the Village Council.

Article 2. Purpose and Functions of the Cooperative.

The Authority is established to provide a forum of cooperative wastewater management by members, to assist each Village to improve the cost-effectiveness of their wastewater management efforts by providing economy of scale while maintaining full control over wastewater management; to assist members to improve programs to collect and treat wastewater and to provide such assistance on an individual basis to each member Village and cooperatively in joint programs with other Villages.

Notwithstanding any provision herein, no member Village shall be obligated to participate in any particular Authority contract, program, or procurement and each Village shall be free to establish its own contracts, programs or procurements independently of the Authority.

Article 3. Board of Directors.

The executive power of the Authority shall be vested in a Board of Directors consisting of three representatives from each Village for a three year term as provided by law, or by local charter or bylaw. These Board members shall serve until their successors are appointed and qualified. The bylaws of the Authority shall provide for how a member Village's vote should be cast if the two representatives from the same Village cast opposite votes on the same motion.

Article 4. Authority and Functions of Board of Directors.

The Board of Directors is hereby authorized and directed to:

- a) Adopt and amend bylaws for the conduct of Board meetings and the regulation of its affairs, provided that such bylaws are consistent with this Agreement and any applicable special or general laws;
- b) Annually, no later than June 30 each year, elect from among its members a Chairman, Vice-Chairman, Secretary, and Treasurer;
- c) Submit a written report each year to each of the member Villages detailing the services provided, funds received, and providing full financial disclosure;
- d) Conduct regional procurements for member Villages;
- e) Prepare, advertise, and award regional contracts for wastewater treatment services on behalf of member Villages;
- f) Develop and implement regional public education programs;
- g) Make recommendations and provide technical assistance to member Villages concerning wastewater management; and,

- h) Recommend policies to member Villages governing wastewater management.

Article 5. Effective Date.

- a) This Agreement shall take effect as of ____, 2010.
- b) Before this Agreement becomes effective or binding on a Village, it must be approved by vote of the respective Village Council in accordance with Belize law ____, § ____.

Article 6. Annual Membership Fees

Each member Village shall pay an annual Membership Fee to the Authority in an amount to be determined by the Board of Directors. Failure of any member Village to make such required payment or otherwise fund the required Membership Fee to the Authority at the time required shall be deemed a notice of termination in accordance with Article 9(a) hereof.

Article 7. Term.

This Agreement shall be in effect for a twelve year term through ____, 2022. The term hereof may be extended for additional five year periods by the affirmative vote, within the last year of the then-current term, of the Village Council of each member Village which desires to extend the term hereof. The failure of any one or more members to vote to extend the term hereof shall not prevent the other members from extending the term and continuing the Authority.

Article 8. Membership.

- a) A member Village may join the Authority by vote in accordance with Belize Law ____, § ____ to approve this Agreement.
- b) A non-member Village may become a member of the Authority upon:
 - (i) A vote by the non-member Village Council in accordance with Belize Law ____§4 ____ to approve this Agreement; and
 - (ii) An affirmative vote by a majority of the Board of Directors to accept the non-member Village as provided in the bylaws of the Authority and subject to such conditions as the Board of Directors may impose.

Article 9. Termination.

- a) Any Village may terminate its membership as of the end of a fiscal year by vote of the Village Council and gives notice to the other members of the intent to terminate this Agreement no later than six months prior to the date of termination.
- b) In the event of termination, the Village terminating the Agreement shall still be obliged to provide its required membership Fee, as provided in Article 6, for the entire fiscal year during which the notice of the termination was given. Any Village giving notice of termination later than December 31 shall be obliged to provide the required membership fee to the Authority for the following fiscal year. Upon such termination, a former member shall have no further rights nor claims with respect to the property, assets, or other rights of the Authority but shall be responsible for liabilities and claims with respect to the period of its membership prior to such termination.

Article 10. Amendment

The provisions, terms and conditions of this Agreement may be modified only by written amendments to this Agreement approved by all members by vote of their respective Village Council.

Article 11. Severability

If any clause or provision of this Agreement or its application shall be held unlawful or invalid, no other clause or provision of this Agreement shall be affected, and this Agreement shall be construed and enforced as if such unlawful or invalid clause or provision had not been contained herein.

Article 12. Assignment.

No member Village shall have the right to assign or otherwise transfer its rights or obligations as a member under this Agreement.

Article 13. Waiver.

Failure of any party hereto to exercise any right hereunder shall not be deemed a waiver of such party's right and shall not affect the right of such party to exercise at some future time said right or rights or any other right it may have hereunder.

Article 14. Interpretations.

For purposes of this Agreement, except where the context clearly indicates otherwise, the use of the singular shall include the plural and pronouns shall include both singular and plural and shall include all genders.

Article 15. Liability

The individual member Villages of the Authority shall not be liable for any actions or decisions of the Authority, and the Authority shall indemnify, defend and hold harmless each member Village from any claim, demand, action or cause of action arising from or caused by any action or decision made by or on behalf of the Authority.

APPROVED AND AGREED TO:

MAYOR OF PLACENCIA

_____ DATE: _____

MAYOR OF SEINE BIGHT

_____ DATE _____

Annex D – Draft USTDA Terms of Reference

A. BACKGROUND

The Inter-American Development Bank (IDB) (in partnership with the Global Environment Facility (GEF) and United Nations Environment Programme (UNEP)) is seeking to use GEF resources to help mobilize greater investments in wastewater management (including collection and treatment infrastructure) in the Caribbean region. The primary objective of this initiative is to establish innovative, feasible financial instruments through pilots for cost effective and sustainable financing of wastewater management in the Caribbean region.

The initiative will support policy reforms, regional dialogue but most importantly, financing of pilot projects such as, but not limited to: i) an inter-municipal wastewater system for the Peninsula of Placencia in Belize (Inter-municipal water services); ii) a financial arrangement with the National Water Commission (NWC) of Jamaica to secure funding through the pledging of K-factor for the rehabilitation of wastewater facilities; (iii) a national revolving fund in Trinidad and Tobago; and (iv) a national revolving fund in Guyana. It will also finance a Project Development Facility window that would provide technical assistance to project sponsors to help bring project to bankable status.

The consultant work defined in this Terms of Reference (TOR) seeks to develop necessary information to support and implement the Belize Placencia Peninsula Project (Project) through the financial mechanism that is the subject of the pilot initiative in Belize. While the Study will have an important impact on the improvement of wastewater management conditions on the Placencia Peninsula, it will also be an important element for defining the effectiveness of the financial approach used to realize the intended results of the Study.

The Placencia Peninsula (Peninsula) in Belize is located on the country's southeast coast and is an important tourist destination. The Peninsula is approximately 16 miles long and 1000 feet wide with an extensive tidal lagoon on its westerly side. There are two communities on the Peninsula including Placencia village at its southern end and Seine Bight in the middle. Additionally, there are individual residences, commercial establishments and beach resorts located throughout the Peninsula. For the most part, wastewater disposal from all existing residential sources is substandard and consists of either direct disposal to the ground from either house laterals or septic tank outlets. Existing wastewater management practices and the high rate of commercial development on the Peninsula and their possible effect on public health and water quality in the Placencia lagoon are significant drivers for the need to improve wastewater management conditions on the Peninsula. In 2006, a preliminary feasibility study of wastewater collection and treatment alternatives for the Peninsula was completed by Engineers Without Borders (EWB). The intent of this current Study is to validate the findings of the EWB and to develop other more detailed information required for implementation of the Project.

STUDY GOAL - The primary goal of the Belize Placencia Peninsula Wastewater Management Study is to evaluate the technical and socio-economic aspects of alternatives available to more effectively manage wastewater throughout the Peninsula. While the Study's technical focus is on the development of an effective wastewater management system for the Peninsula, the Study is also intended to provide important information for further development and use of the financial approach that is the subject of the IDB/GEF/UNEP pilot initiative.

STUDY OBJECTIVES - The key objectives of the Study include the following:

1. Accumulation and assessment of all technical, infrastructure, and socio-economic information relative to the current management of wastewater derived from all categories of sources on the Placencia Peninsula. Existing wastewater source categories include: the communities (Placencia and Seine Bight) on the Peninsula, individual residences and commercial establishments outside of the communities, and the beach resorts that exist or are under development.
2. Characterization of the general quality and quantity of wastewater to be managed in the Study area (or in regions of the Study area) from all categories of wastewater sources.
3. Evaluation of technical alternatives for collecting, treating and disposing of wastewater in accordance with applicable standards relevant to the Study area and international sound practice. (The technical alternatives shall include potential wastewater treatment sites (including sites that may be located outside of the Peninsula) as well as alternative approaches and technologies for collection and treatment through either centralized or decentralized means.)
4. Definition and recommendation of optimum sustainable alternatives to accomplish the Project intent including the implementation of effective wastewater management infrastructure and practices as well as the development of supporting and necessary financial/economic mechanisms including service charges and user fees, etc. to assure the economic sustainability of any resulting systems.
5. Completion of a preliminary environmental and development impact evaluation of the Project.
6. Development of an implementation plan by which the Project sponsors can move forward to implement and construct all elements of the Project through the CReW financial mechanisms provided as a result of the pilot initiative.

A. STUDY WORK PLAN

The following work tasks and related activities are aimed at conducting the Study and define the work that will be required of the Consultant selected to undertake the Study.

Work Task 1 - DATA COLLECTION AND REVIEW

The demographic and land-use characteristics of the Peninsula require that there be a detailed evaluation of the location and nature of wastewater sources throughout the Study area. As a result, the Consultant shall:

1.1 Acquire from the all applicable government agencies in Belize, all studies, engineering design documentation, wastewater generation and water quality data, operational data, and environmental regulatory documents relative to wastewater generation, collection and treatment in the Placencia Peninsula region. At a minimum, this will include the preliminary feasibility analysis undertaken by Engineers Without Borders in 2006 for defining wastewater management on the Peninsula.

1.2 Coordinate and participate in regular meetings with the assigned government representative to share findings and obtain feedback on project progress and issues as they arise.

1.3 Utilize the data and information collected to identify outstanding data needs in order to complete the subject Study.

1.4 Determine all statutory and regulatory requirements relevant to the Project including all laws and regulations that pertain to the design and implementation of collection, treatment and discharge of wastewater to receiving waters in Belize and International norms.

Deliverable - A database of existing information relevant to the implementation of the Project including, but not limited to:

- Existing design/pre -design documents and any other technical data
- Reports
- Studies: Any existing study on population growth (fix and floating), water demand, expansion areas, land use, etc.
- Regulation and standards: Regulatory requirements and any other information important to assessing wastewater collection, treatment and discharge requirements in the Study area. This will also include the detailed list of parameters and the entity responsible for its enforcement. It should be noted that the LBS protocol parameter should also be used as a guide.

Work Task 2 - POTABLE WATER SOURCE INVESTIGATION AND CHARACTERIZATION

This work task is intended to define and characterize all available sources of potable water used for residential and commercial purposes on the Peninsula. This data is necessary to further investigate the magnitude of wastewater generation on the Peninsula. Specific activities to be accomplished within this work task include the following:

2.1 Define all potable water sources for current and projected land use on the Peninsula including any water provided by 1) the Government of Belize through

pipings from locations outside of the Peninsula, 2) The Placencia and Seine Bight Water Boards, and 3) other private sector entities on the Peninsula.

2.2 Based on annual reports and financial records of the Seine Bight and Placencia Water Boards and based on a survey of water users on the Placencia Peninsula that obtain water from other sources, determine current and historical water consumption at major wastewater sources on the Peninsula including existing community/village areas and the major resorts.

Work Task 3 - WASTEWATER SOURCE ANALYSIS

This work task is intended to identify and evaluate the current and future sources of wastewater within the Study area so as to determine any unique characteristics that may affect the ultimate design of the collection and treatment works developed through the Project. Specific activities to be accomplished within the work task include the following:

3.1 Identify and evaluate existing residential and commercial generators of wastewater for collection and treatment including seasonal wastewater generation variations and any other issues that may influence the design of an effective wastewater management system. This will include: 1) the identification of the existing wastewater treatment facilities owned and operated by resorts and other commercial establishments on the Peninsula 2) the initial capital costs and current operational costs of these facilities, 3) the date the facilities were placed in operation and their current means of wastewater management. Any proposed resort areas (including expansion of existing resorts) will also be evaluated to determine proposed wastewater management practices.

3.2 Identify and evaluate clustered wastewater generator areas such as the two communities to determine whether separate wastewater management systems can be developed to individually serve these clustered areas. In addition, identify the projected future wastewater generation rate over a 25 year period.

3.3 Determine the quantity of wastewater to be collected and treated including average and peak demands/seasonal variations for all resorts on the Peninsula.

3.4 Determine the areas and regions of the Peninsula from which wastewater might be economically collected by a regional collection system which would be expanded to the mainland where the wastewater facility will be located including consideration of 1) a centralized collection and treatment system serving the entire Peninsula, 2) centralized systems serving specific portions of the Peninsula such as the villages and 3) decentralized systems for resorts and individual residential/commercial generators. In addition, this evaluation will also include mainland areas (such as the village of Independencia) outside of the Peninsula where a wastewater treatment facility serving the Peninsula may be located.

3.5 Define target wastewater treatment standards based on existing laws and regulations in Belize and on sustainable and established international sound practice standards applicable to the region.

3.6 Identify the necessary approvals and permits to be obtained for wastewater treatment and discharge infrastructure and determine any issues related to obtaining such permits.

Deliverable - An inventory and analysis of existing and future wastewater generators including, but not limited to, community, residential and commercial (resorts, etc.) sources. An identification of existing or pending regulatory requirements and necessary permits. Identify the potential generators of hazardous liquid waste and their current practices for disposal.

Work Task 4 - WASTEWATER COLLECTION ANALYSIS

Specific activities to be accomplished within this work task include the following:

4.1 Description of the soil quality and its permeability profile.

4.2 Define the feasibility of operating a conventional sewer system including gravity sewers, pumping stations and trunk sewers considering permeability of the soil, aquifer conditions, water sources contamination risks and estimated costs. This task will include a general concept design of main sewers in order to have an estimate of diameter, length and need of pumping stations. A cost estimate will be made with these assumptions. Flow estimates will include infiltration and rainfall flows.

4.3 Evaluate the applicability of alternative wastewater collection technologies and approaches to serve the Peninsula as a whole or to serve areas with clustered wastewater generators such as the communities. The consultant will specially consider the systems recommended in the Engineers without Borders report.

Deliverable - An assessment of alternative wastewater collection systems for the study area based on the physical characteristics, flows generated, available technology, applicability and cost (investment, operation and maintenance) to determine the most feasible option for a sewage collection system.

Work Task 5 - TREATMENT TECHNOLOGIES EVALUATION

This task is intended to evaluate wastewater treatment technologies that can comply with target performance standards in effect in Belize at the time of the Study and to international sound practice standards. At a minimum, the Consultant shall:

5.1 Identify and evaluate technologies for treatment of wastewater at the residential, community, and Peninsula level to meet the target effluent quality for discharge.

5.2 Identify all potentially viable treatment alternatives and sites based on effectiveness, implementability, sustainability and cost. This may include mainland sites off the Peninsula. Treatment options must include sludge treatment and disposal. 5.3 Consider treatment alternatives that would allow use of technologies and treatment approaches that are available in Belize or in conjunction with imported technologies.

5.3 Identify decentralized approaches to wastewater management that may be viable for individual residences and other small quantity generators in isolated locations throughout the Peninsula.

5.4 Determine the potential sources for all materials that may be required for development of community or Peninsula based collection and treatment systems. Identify United States suppliers (name, address, contact person, etc.) of the technologies viewed to be viable for the Project that must be imported.

Deliverable - An evaluation of viable and sustainable technologies that are capable of effectively treating wastewater generated within the Study area. At a minimum, this evaluation will include an assessment of both primary and secondary treatment processes for centralized community or Peninsula based treatment systems as well as decentralized systems that may be viable for individual residences, commercial establishments and major resorts. All individual solutions must include a sludge management program including collections and disposal, if applicable.

Work Task 6 - ALTERNATIVES ECONOMIC EVALUATION

The purpose of this task is to conduct a detailed economic evaluation of potentially viable alternatives identified in previous tasks. At a minimum, the Consultant shall:

6.1 Prepare detailed cost estimates of the potentially favorable technologies based on capital expenditures (CAPEX) (and re-investment cost separate for civil and electro-mechanical works) and operating/maintenance expenditures (OPEX) for a period of 20 years separately for the sewer network and the WWTP. This analysis will include consideration of all possible alternatives for cost recovery from fees to be collected from wastewater generators. In addition, a Present Worth analysis will be prepared for cost comparisons of technical alternatives.

6.2 Identify the most favorable alternatives (based on both technical and economic cost effectiveness and sustainability as well as prevailing conditions in Belize and on the Placencia Peninsula). This should include potential costs and revenues that may be derived through use of any off-Peninsula location by wastewater sources that may be located near a mainland treatment location. This exercise will also include at least three scenarios with different collection rates, connectivity of clients, cost fluctuation and tariff levels.

6.3 Perform a detailed evaluation of the most suitable alternatives, and with the assistance of the IDP and Project stakeholders, select the recommended option. Criteria to be used in this evaluation and selection process include: expected effectiveness and reliability, environmental mitigation, implementability and constructability; affordability, expandability, operational considerations, ability to be phased, sustainability and life cycle costs.

6.4 Based on an assessment of customers served by the preferred approach, evaluate the tariff levels necessary to obtain full costs recovery for the wastewater collection and treatment system. This analysis should consider capacity to assess fees, willingness to pay, cross subsidy tariff systems and special charges for resorts based on an occupancy fee. 6.5 Evaluate and define potential phasing of the

infrastructure technical development to conform or correlate to possible limitations in financial resources to fully implement the Project.

Deliverable – Cost Estimates and an economic model aimed at assessing initial and life cycle costs associated with the recommended alternatives for collecting and treating wastewater within the Study area. Tariff setting recommendations and schemes that achieve full cost recovery in the most socially-sustainable manner. The models shall, at a minimum, present all economic aspects (near term and long term) of the recommended technical approach for wastewater collection and treatment.

Work Task 7 - PRELIMINARY DESIGN DEVELOPMENT

Based on the economic analysis and technical definition of the wastewater collection and treatment alternatives and subsequent selection of the best alternative by the Project sponsors, the Consultant shall develop a preliminary design of the overall selected wastewater collection and treatment system and its individual component infrastructure. The preliminary design shall suggest, when possible, U.S. technologies that fulfill the technical needs of the Project. To accomplish this, the Consultant shall:

7.1 Develop a detailed technical definition of the preferred wastewater collection and treatment system and its individual component facilities and systems.

7.2 Prepare preliminary designs of the recommended wastewater collection and treatment system components. Elements to be presented shall, at a minimum, include a preliminary graphical layout of the proposed facilities, hydraulic profile, preliminary design report, process flow schematics, and component details/specifications that clearly illustrate the intended components of the collection and treatment infrastructure.

7.3 Develop a preliminary Project institutional management plan presenting requirements for accomplishing the design, construction, operation and maintenance of the proposed collection and treatment infrastructure. At a minimum, this will define the following aspects:

- Organizational chart with position and task description for individuals and units
- Identification of any administration facilities needed
- Budgeting

Deliverable - A detailed preliminary design of the proposed collection and treatment system establishing, at a minimum, preliminary technical design criteria and specifications of all major components associated with collection, treatment and discharge components of the proposed system. A management plan for implementing the various elements of the Project.

Work Task 8 - ENVIRONMENTAL IMPACT ANALYSIS

The objective of this work task is to evaluate the environmental impact of the Project. The Consultant shall perform a preliminary review of the Project's

environmental impact associated both with the construction of the required infrastructure as well as its overall function once it is in operation. This environmental impact review shall identify potential positive and negative impacts of the Project. Specific activities shall include:

8.1 Conduct a limited and focused environmental impact evaluation of the recommended collection and treatment system alternative selected in Work Task 7 including the site selected.

8.2 Prepare recommendations for mitigating any negative environmental effects for the selected alternative from Work Task 7.

8.3 Prepare a community consultation plan

8.4 Prepare a monitoring plan

8.5 Prepare an emergency plan

Deliverable - A preliminary environmental impact analysis of the recommended collection, treatment and discharge system(s) including both near term construction environmental impacts as well as long-term beneficial environmental impacts associated with the development of effective wastewater management throughout the Peninsula.

Work Task 9 – DEVELOPMENTAL IMPACT ANALYSIS

The Consultant shall report on the potential development impacts of the Project in Belize and in particular the Placencia Peninsula region. While specific focus should be paid to the immediate impact of the Project, the Consultant shall include, where appropriate, any additional developmental benefits of the Project, including spin-off and demonstration effects such as the replication of unique technical or financial (as reflected by the CReW pilot initiative) activities in other applications. The Consultant's analysis of potential benefits shall be as concrete and detailed as possible. The development impact factors are intended to provide the Project's decision-makers and interested parties with a broader view of the Project's potential effects in Belize. Specific activities to be accomplished within this work task include the following:

9.1 Evaluate and provide estimates of the Project's potential benefits in the following areas:

- Infrastructure/Industry: Infrastructure success shall be defined as the sustainability and replicability of the recommended approach in managing other similar wastewater conditions in Belize or other countries in the Caribbean Region.
- Market-Oriented Reforms: The Consultant shall provide a description of the regulations, laws, or institutional changes that are recommended and the effect they would have if implemented. At a minimum, this should include changes that affect the economic sustainability of the proposed Project through revenue enhancement.

- **Human Capacity Building:** The Consultant shall address the level of technical capacity available for development and management of the proposed Project. Key deficiencies shall be identified by the Consultant with recommendations for technical capacity enhancement to assure Project success.
- **Technology transfer and Productivity Enhancement:** The Consultant shall provide examples of new (to Belize) technologies that may be utilized as a result of the implementation of the Project.

Deliverable - An assessment and definition of the development impact of the Project including the short-term and long-term benefits to the Study area, Belize and the Caribbean region. The development impact analysis shall also provide an assessment of human capacity capabilities and deficiencies available in the Study area so as to help assure sustainable success of the Project.

Work Task 10 - PREPARE IMPLEMENTATION PLAN AND SCHEDULE

The Consultant shall develop an implementation plan to accomplish the individual tasks defined in the conceptual design. The implementation plan shall include procedures required to accomplish final design and permitting of all recommended component facilities. The Consultant shall also include a project implementation schedule to measure the pace of progress in implementing the Project. At a minimum, work task activities shall include the following:

10.1 Identify all required additional work to accomplish final design and permitting for the required physical components of the selected wastewater collection and treatment approach.

10.2 Develop an implementation plan presenting the resources and procedures required for final design, permitting, financing, constructing and implementing the recommended facilities defined in the conceptual design. If required due to financial limitations and the overall cost of required infrastructure, the implementation plan will provide Project implementation phasing recommendations.

10.3 Develop a reasonable schedule of implementation (including development phasing) for all system components based on the probable implementation and financing activities. In developing the schedule, consideration shall be given to phased construction to allow critical components to be placed in service on an accelerated schedule or to meet limitations that may result from the availability of financial resources.

10.4 Develop a budget for each component of the Implantation Plan.

10.5 Develop a terms of reference for the completion of the design of the selected approach.

Deliverable - A detailed implementation plan presenting the steps required to develop the Project including the possibility that the Project will be developed in incremental steps. A detailed Project schedule shall also be developed by the

Consultant based on the technical definition of the Project and the ability of the Project sponsor to implement it.

Work Task 11 - FINANCIAL PLAN DEVELOPMENT

Based on the conceptual design and on the projected capital costs of the proposed facilities, a financial plan shall be developed based on the IDB plan for establishing the pilot prototype financial mechanism. This plan shall include the means by which the project will be financed including financial sources that would particularly serve U.S. equipment exporters. Work task activities include the following:

11.1 Develop a financing plan for implementation of all system components based on the CReW financial resources approach and on any Project implementation phasing that may be due to the limitations associated with available financial resources.

11.2 Evaluate the means by which U.S. suppliers can participate in the procurement process established for implementation of the Project.

Deliverable - A detailed financial plan providing the basis by which financial resources can be secured for implementation of the project through the CReW. The financial plan shall include the conditions that must be met in achieving key financial institution requirements.

Work Task 12 - STUDY REPORT PREPARATION AND SUBMISSION

The Consultant shall prepare a comprehensive feasibility study report that summarizes the results of all analysis and designs accomplished for this Project. The report shall serve as a basis for continuing development activity relevant to implementation of the Project. Work task activities in developing the Study report include the following:

12.1 Prepare an intermediate report for validation of the recommended approach to wastewater collection and treatment. This will be the basis for decision making referenced in Work Task 6 above.

12.2 After completion of all work, prepare a draft report and circulate 10 copies to Project team members for review and comment.

12.3 Meet with Project team and other stakeholders to review comments.

12.4 Incorporate pertinent comments and recommended revisions into the final report.

Deliverables – The Consultant shall submit the following deliverables:

1. Draft work plan outlining the deliverables and key milestones. This shall be submitted within 15 days of the contract approval.
2. An interim report that allows Project sponsors to validate the Consultant's recommendations and selected a preferred approach for conceptual design and remaining work. A detailed and comprehensive report presenting and describing all elements of the project as defined in the above work tasks.

3. The Consultant shall ensure that the Final Report is submitted in accordance with Clause I of Annex II of the Grant Agreement. The Final Report shall be a substantive and comprehensive report of all work performed to carry out all of the tasks set forth in the Terms of Reference and shall include, among other things, an Executive Summary and all component deliverables. The Final Report shall also include a comprehensive list of suppliers, including potential sources of U.S. equipment and services, relevant to the implementation of each component of the Project as outlined in the Study.

At a minimum, the Consultant will provide both the Grantee and USTDA with 6 copies (each) of the final report in hard copy and on CD-ROM. The CD-ROM version of the final report will include:

- Adobe Acrobat readable copies of all documents;
- Source files for all drawings in AutoCAD or Visio format; and
- Source files for all documents in MS Office 2003 or later formats.

Each work task of the Terms of Reference as defined above) shall provide information and analysis consistent with the required chapters of the Final Report as outlined below. The following specifies the recommended organization and outline of the Study report which, at a minimum, will contain the following components:

1. Executive Summary. This section will be a summary of all findings and recommendations associated with the Study.
2. Purpose and Objective of the Study. This section should contain a concise statement of the intent of the Study and its desired objectives.
3. Technical Assessment. This section should include relevant background information that is pertinent to the technology selection for (decentralized or centralized) collection and treatment of wastewater on the Peninsula.
4. Economic Analysis. This section will usually include a cash flow analysis and other required economic considerations to define the economic impact of the Project and the necessary means to establish its operational and maintenance sustainability. (This should also include any economic impact that may be derived through use of any off-Peninsula treatment facility by wastewater sources in proximity to the mainland treatment location.
5. Financial Analysis. This section should consider the availability of financing through the CReW and the conditions that will be applied to the implementation of the Project based on the criteria and requirements associated with the financing mechanism.
6. Environmental Impact Analysis. A preliminary review of the Project's anticipated impact on the environment. This preliminary environmental impact review should identify potential negative impacts and discuss the extent to which

they can be mitigated. This section should also identify any positive impacts that may be derived from implantation of the Project

7. Review of Regulatory Issues. This should include a discussion of any existing or pending laws and regulations that would impact the selection of the best alternative to achieve the Project's objectives.

8. Key Host Country Development Impacts. (Infrastructure, Human Capacity Building, Technology Transfer and Productivity Improvement and/or Market-Oriented Reform). These Development Impact factors are intended to provide the Project's decision-makers and interested parties with a broader view of the project's potential effects on Belize or the region. The analysis shall focus on what Development Impact is likely if the Project is implemented according to the Study recommendations. While specific focus shall be paid to the immediate impact of the project, analysis shall include any additional developmental benefits that may result from the project's implementation, including spin-off and demonstration effects.

9. U.S. Sources of Supply. While aiming at optimum specifications and characteristics for the Project, the Consultant will provide an assessment of the availability of potential U.S. sources of supply for all components of the recommended collection and disposal system. This will apply to both centralized and decentralized means of wastewater management identified for all categories of wastewater generators. Business name, point of contact, address, telephone, e-mail, and fax numbers shall be included for each source.

10. Implementation Plan and Schedule. This section will identify and present in detail the anticipated next steps necessary to implement the project. It will also present an achievable and reasonable schedule for accomplishing all tasks required to accomplish the Project.

C. CONTRACTOR SELECTION CRITERIA

The Consultant's Study team's skill set shall include a number of necessary capabilities. These required skills are listed below and will serve as the basis for Consultant selection to perform this Study. The relative evaluation weight of each experience criteria is also shown.

- Project management skills pertaining to the wastewater treatment projects (10%)
- Regional experience in the Caribbean region and in Jamaica or in comparable emerging market economies (15%)
- Experience related to planning, design and operation of wastewater treatment plants (15%)
- Experience with technologies that could be applicable for this project (15%)
- Experience with the economic evaluation and modeling of wastewater treatment projects (15%)
- Wastewater utility assessment and capabilities evaluation (15%)

- Experience with and knowledge of the procedures used by and requirements of Inter American Development Bank including, at a minimum, procurement procedures and project requirements for financing (10%)
- Working knowledge of U.S. companies who may provide services and technology for Caribbean regional wastewater sector projects. (5%)

4 Regional Wastewater Revolving Fund for Trinidad and Tobago

4.1 Introduction

CRew efforts began in the Republic of Trinidad and Tobago at the request of the Water and Sewerage Authority (WASA), the governing body for all water and wastewater issues at the level of service and supply to the national community.

Approximately two years ago, WASA started the takeover of small abandoned wastewater treatment plants with the initial takeover of twenty-four plants and eleven lift station previously owned by the National Housing Authority (NHA) and the Housing Development Corporation (HDC). The adoption of these additional plants proved unprofitable due to the high cost of O&M and the low tariffs associated with wastewater

The existence of abandon wastewater treatment plants was the result of the national government's policy decision of requiring residential and industrial land developers to build and operate their own sewers and packaged wastewater treatment plants (in Tobago the wastewater treatment plants are mainly owned by hotels). The intention was to allow WASA to expand its central sewerage systems, allowing for a later connection of these new housing schemes and the closure of the packaged wastewater treatment plants. However, developers had no authority to collect fees to pay for operation and maintenance (O&M) costs. In most cases, once the developments were completed, O&M ceased and as a result, these plants became orphaned giving rise to low service levels and poor quality effluent being discharged into the environment.

It is estimated that nearly all of the privately-owned 'orphan' wastewater treatment plants are mal-functioning with an estimated 200 plants in Trinidad having been abandoned. The conditions at the 'orphan' plants present a general threat to water sources and, in particular, surface water bodies. Improperly treated effluent has adverse effects on river water quality, thereby increasing bacterial and viral contamination, turbidity levels and reducing the dissolved oxygen content. This continued disposal of untreated sewage into rivers and coastal waters has an effect on the quality of both human and aquatic life, and in the case of Tobago poses a serious environmental, ecological and economical threat.

Officials of the Government of Trinidad and Tobago (GOTT) also expressed concern about Buccoo Reef and other fringing reefs in southwest Tobago that have suffered substantial loss of live coral cover and a reduction in the diversity of marine fauna. The Buccoo Reef is recognized as the island's most valuable natural asset and is a major attraction for the expanding tourism industry with over 40,000 visitors per year. Tourism generates approximately 55% of Tobago's GDP, with fishing being the second largest industry. The reef complex is an important nursery for commercially important stocks of fish and shellfish, in particular lobster and conch.

The largest contributing factor to the decline of the Buccoo Reef is due to the high nutrient levels on Buccoo Reef originated from land-based sources of sewage. Approximately 80% of households in southwest Tobago have soak-away septic tanks built into the porous coral limestone rock that leach nutrients into the subterranean ground-water that eventually seeps out onto the inshore reefs. The remaining households are connected to several small sewage treatment plants which mostly have been delivering inadequate levels of treatment. The effluent from these plants enters coastal waters at known point sources of contamination where high levels of fecal bacteria and BOD have been recorded.

4.2 Financing Mechanism

4.2.1 Background

In Trinidad and Tobago, the original concept for the CReW was to pilot the repair or replacement of three abandoned wastewater treatment facilities at selected housing developments. Three different treatment technologies would be tendered out in order to determine the most appropriate and cost-effective solution. After a year of operation an evaluation would be made of each plant based on the following criteria:

- Final costs of construction compared to projected cost estimates
- Annual operational and maintenance costs as compared to projected estimates
- Quality of treatment as compared to performance estimates provided by vendors

Once this information was obtained, WASA would have comparative data on three technologies for the bulk purchase of the preferred technology for other abandoned plants.

However, as demonstrated in other pilots, the concept would be modified to adapt to the local needs and priorities.

4.2.2 Description

Based on the many problems associated with the identified orphan plants, GOTT has requested the Bank's assistance in financing a comprehensive condition assessment of the orphan wastewater treatment plants. Discussions with the GOTT are on going regarding this request, which is expected to result in consideration of a loan from IDB to the GOTT for the full costs of repair and replacement of the 200 abandoned sites. Contracting for the consultancy will begin in the second quarter of 2010. Projects will be selected for financing base on the results of this study.

The IDB held consultations in the recent past with GOTT, the Tobago House of Assembly (THA) and the Buccoo Reef Trust (BRT) to develop a project aimed at reducing coastal nutrient pollution in southwest Tobago. Preliminary discussions were related to building a sewage collection system from Plymouth to Crown Point

with a main treatment plant at the southwest tip of the island (Crown Point) where a deep-sea outfall pipe was to discharge the treated effluent. The exact location and length of the discharge pipe still is to be determined since additional oceanographic studies are required in order to inform the precise placement of this outfall pipe.

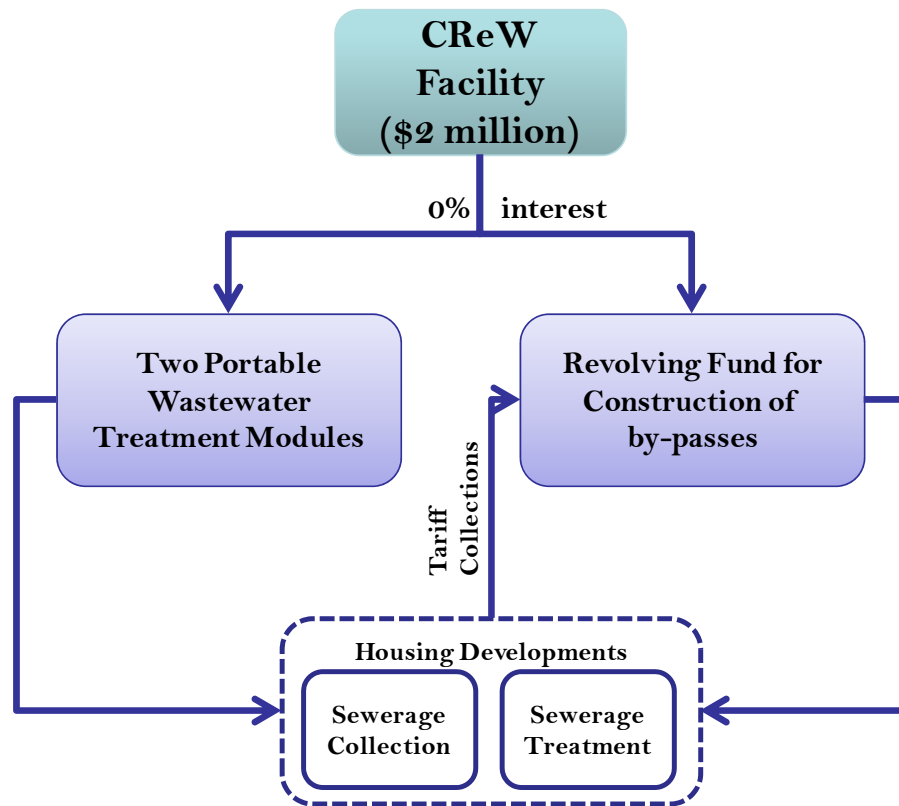
The CReW pilot project for Tobago intends to build on the extensive existing knowledge acquired from these consultations to identify potential projects for development. Private sector interest, represented by the real estate developers, will be contacted to gauge their interest in contributing to the build out of the sewage collection system as a cost effective alternative to their individual package treatment plants. Potential public private partnership structures will be investigated

PFM Option 1: Orphaned Treatment Facilities

WASA has begun addressing some of the abandoned wastewater treatment facilities by creating, in the location of the facilities, by-pass systems where the sewage is redirected to a centralized wastewater facility. This can include rehabilitation of existing lift and/or pump stations or construction of new facilities, as well as the laying of pipes to an existing regional wastewater treatment plants. WASA indicated that the average cost for a by-pass project would be around TTD 750,000, (approximately US\$ 130,000) and could be completed in 6 months under ideal circumstances. Once the by-pass is completed, WASA would then have the right to collect wastewater fees from the housing development. There are currently over 20 facilities that are within close proximity to a centralized wastewater treatment facility and can be considered for by-pass.

Under this financing mechanism, the CReW funds will be used to assist WASA in the financing of the by-pass initiative in Trinidad. As there are over 20 abandoned wastewater treatment plants that are in proximity to a centralized wastewater treatment facility, it is proposed that the CReW will (i) set up a revolving fund for financing by-passes; (ii) invest in two portable wastewater treatment modules.

Figure 4-1: Schematic of the Option 1 for Proposed National Revolving Fund



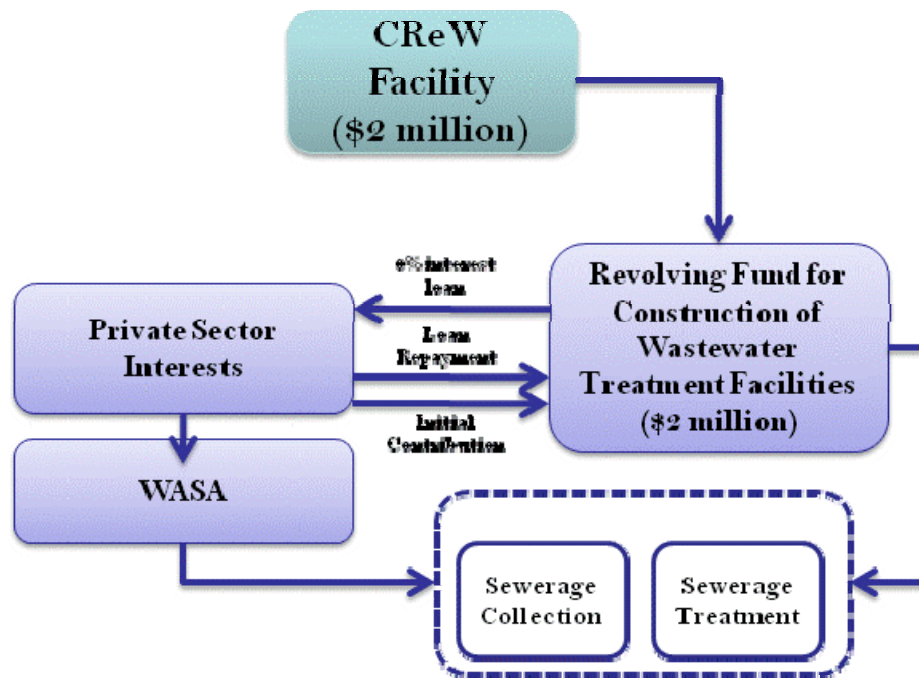
The financing mechanism I would allow for the refurbishment of two abandoned wastewater treatment plants at any given time, while the two portable wastewater treatment facilities would temporarily treat the wastewater during the construction of the by-pass. The revolving fund would be replenished through the collection of wastewater fees from the housing developments and as the number of completed by-passes increase, the reflow into the revolving fund would accelerate accordingly. Depending on the capacity of the newly established wastewater authority, more by-passes can be financed simultaneously to accelerate the connections to the existing centralized treatment plants.

The pilot would also be a complimentary part of an upcoming longer-term and larger-scale IDB public sector loan to the Wastewater division of the Trinidad & Tobago Water Authority, related to the rehabilitation of Trinidad & Tobago's waste water facilities (Plan of Operations for the Preparation of Wastewater rehabilitation Program (TT-11019)).

PFM Option 2: Wastewater Treatment Financing for Tobago

Under this financing mechanism, a revolving fund would be established in Tobago offering zero-interest loans for private sector stakeholders (including local hotel owners and commercial developers) towards installation of wastewater treatment facilities, either on-site or a joint plant if few establishments are within proximity of each other. The private sector stakeholders would, as a condition of the concessionary financing, contribute a portion of the total financing (5%-10%) upfront, to be transferred to the revolving fund.

Figure 4-2: Schematic of the Option 2 for Proposed National Revolving Fund



As an example, if a wastewater treatment facility cost \$200,000 which has the capacity to process wastewater for four adjacent hotels, each of the establishment would contribute \$10,000 – \$20,000 towards the revolving fund and in return would receive a zero-interest loan for the balance of the investment cost. If a 5% contribution is assumed, then the revolving fund would have an outstanding loan of \$160,000. Tenure for the loan can vary depending on the debt service capacity of the borrowers.

PFM Option 3: Financing for Wastewater Treatment in Trinidad and Tobago

Under a third option, the \$2 million from the CReW will be split between Trinidad and Tobago, conceptually using the same models as described above.

4.2.3 Administration

Currently the institutional arrangement and the policy direction for wastewater are undergoing transition and restructuring. A new wastewater authority was being proposed to functionally separate the responsibilities from WASA and the new wastewater authority, which is projected to be completed by the end of 2010, was envisioned to be the administrative body responsible the operations of the pilot.

However, since the elections that took place in the summer of 2010, a new government has been elected and has changed the direction of the water sector strategy. It is now the proposal of the new GOTT that water and wastewater will be managed jointly as before.

4.2.4 Eligible projects

Eligible projects would include 20-30 abandoned plants that can be addressed through connection process or projects selected by the Tobago Revolving Fund that advance the goals of the Cartagena Convention and are located in a watershed area that drains into Caribbean coastal waters.

4.2.5 Current Status

In June 2010, elections took place in Trinidad & Tobago, and a new Government has come into power. While all indications are that the new GOTT is equally enthusiastic, if not more so, with regards to the CReW, discussions will be reinitiated formally with the GOTT once the National Strategic Plans are finalized in the coming months.

The selection of the first generation project will be based on the PFM selected and it would be envisioned to be supported by or to support an IDB operation.

4.2.6 Next Steps

- Reach agreement with the GOTT on the preferred option
- Draft necessary documents to implement the preferred option
- Finalize TOR for comprehensive condition assessment of the orphan wastewater treatment plants
- Select consult for Assessment
- Review IDB documentation of discussions with GOTT regarding the Buccoo Reef project to help identify projects for financing.

Annex A: Synthesis of Water Sector Strategy for the Government of Trinidad and Tobago¹

I. ORGANIZATION OF THE SECTOR

The water and sewer services in Trinidad and Tobago are provided by the Water and Sewerage Authority (WASA), which was established under the Water and Sewerage Authority Act in 1965. WASA falls under the purview of the Minister of Public Utilities (MPU), who appoints a 9 member Board that is lead by a chairman with the day-to-day activities are managed by an Executive Director.

In addition to WASA and MPU, the following agencies are stakeholders in the water and sewerage sector: (1) Regulated Industries Commission (RIC) – Responsible for setting rates and assessing the efficiency of the organization; (2) Water Resources Agency (WRA) – Previously a department within WASA, this agency is responsible for the management and allocation of water resources as outlined in the Natural Water Resources Management Policy approved by the Government of Trinidad and Tobago (GoTT); (3) Forestry Division of the Ministry of Agriculture, Land and Marine Resources – Responsible for the land management aspects of water resources management; and (4) Ministry of Health - Responsible for the control of the quality of water supply and wastewater disposal.

II. SECTOR INDICATORS

It is estimated that 92% of the population in Trinidad and Tobago has access to potable water, however only 21% (17% in Trinidad and 41% in Tobago) have access to a continuous supply of potable water. Potable water is defined as access via a water service connection or within 400 m of a standpipe.

WASA has approximately 350,000 customers of which 96.5% are residential; 2.5% industrial and commercial; and 1% agricultural.

Less than 30% of the population has access to wastewater services; here wastewater service is primarily available in Greater Port of Spain, Arima and San Fernando.

Based on GoTT's Vision 2020 and the Water Policy of GoTT², the target outcomes for the sector by 2010 are: (1) At least 60% of the population having 24/7 access to water supply so that no customer has less than 3 days of water per week; (2) At

¹ The information provided in this synthesis is a summary of the "Water Sector Strategy" prepared by Cecil Pemberton, June, 2008.

² Water Policy of GoTT was established following Vision 2020 and was intended to supersede Vision 2020 in some key areas. The information provided above is a consolidation of the two documents with the relevant sections superseded.

least 95% of the population having access to potable water. (3) At least 35% of the population to have access to central sewerage systems through a house connection. (4) At least 30% of households are metered. (5) A water supply system that would have the capability to withstand drought for at least three consecutive years. (6) Improvements in the quality of effluent being discharged to receiving waters. (7) Unaccounted for water is reduced to less than 55%. (8) Quality of service standards for WASA established and maintained; and (9) Financial performance of WASA improved.

World Health Organization (WHO) reported that in 2006 the infant mortality of children 5 years and younger was 38 for every 1,000 live births³⁴ in Trinidad and Tobago.

III. SERVICES

Water

WASA's water supply treatment and distribution system assets⁵ consist of 23 surface water treatment facilities; 53 groundwater treatment facilities; 48 rural intakes and spring sources; 4 raw water impounding reservoirs with a total storage of 73.2 million cubic meters (MCM); 436 wells; 4,500 km of water mains; 118 service reservoirs; and 120 pumping stations.

Approximately 365 MCM of potable water is produced annually by WASA, of which 43% is used by domestic customers, 9% by light and heavy industries, 4% commercial customers, less than 1% agricultural customers and the remaining 42% is non-revenue water (NRW).⁶

WASA's water supply comes from a combination of surface water, ground water and sea water. 62% of water supply comes from surface water, 27% from groundwater and the remaining from desalination. Large scale development of surface water has been limited to 4 rivers, which are the Caroni and Oropouche Rivers in the Northern Basin, the Navet River in the Central Range in Trinidad and the Hillsborough River in Tobago. The groundwater resources are derived from two sources – traditional aquifers and deep-seated 'megawatersheds', which are deep seated subsurface groundwater systems. The surface water and ground water treatment facilities are owned and operated by WASA, while the desalination facility is owned and operated by a private entity and provides water to WASA under a 20-year contract.

³ Source: World Health Organization Country profile. <http://www.who.int/countries/tto/en/>

⁴ This compares to 14 for Bahamas; 12 for Barbados; 16 for Belize; 62 for Guyana; 32 for Jamaica; and 39 for Suriname.

⁵ It should be noted that WASA purchases water from a desalination plant that is privately owned. This plant is located in the Point Lisas Industrial estate and provides 11% of Trinidad and Tobago's total daily production. The BOOT contract is between WASA and the operator/owner, Desalcott, for a period of 20 years.

⁶ It should be noted that non-revenue water is estimated to range between 42% to 60%; however due to the lack of production and consumption information, it is difficult to accurately estimate the non-revenue water volume. It is assumed that WASA's NRW is primarily due to illegal connections and leakages.

A study performed in 1997 indicated that the annual surface water availability was 3,740 MCM; while for the groundwater sources, the annual availability was estimated at 1,209 MCM. It is currently estimated that the overall water supply withdrawal is about 9% of the annualized available resources.

The major issue concerning surface water is watershed protection. Over the years, due to a lack of inter-agency coordination, there have been several physical actions that have resulted in reduced flows of the rivers and streams during the dry season; high turbidity during the rainy season; and in some cases heavy pollution of the rivers and streams from domestic and/or industrial wastes.

The major issues for ground water are leaching from hazardous waste dumps, underground fuel storage tanks, untreated sewage, industrial activities, pit latrines and septic tanks; and agricultural activities have been identified as potential sources of pollutants to aquifers. In addition, as a result of the absence of an agency to oversee the compliance of WASA's operations, WASA has produced water in excess of the safe yield of some of aquifers, which has resulted in saltwater intrusion.

Less than 1% of WASA's residential customers are metered.⁷

Some of the key deficiencies that have been identified for the WASA water system assets are: (1) Decline in the condition of water supply assets due to a lack of maintenance; (2) Water supply operations do not comply with the adopted WHO drinking water guidelines; (3) Estimated that 30% of mains in the transmission and distribution system have under-capacity mains; (4) High break/leak rate which contributes to the high NRW. Trinidad's pipelines experience a break/leak rate of 3,500 per month, while Tobago's pipelines experience 400 per month; and (5) Inadequate preventative and corrective maintenance of the distribution system. Specifically over 52% of Trinidad's pipes are metallic with little to no corrosion protection, which is assumed to be one of the contributors to leakage.

Wastewater

The wastewater system was first introduced to Trinidad and Tobago in 1861, with the commissioning of a clay pipe collection system and an outfall in the Central Business District of Port of Spain (CBD). It has been reported that some of these pipes still exist and many are undersized and collapsing. WASA wastewater collection system consists of less than 600 km of pipe in Trinidad and Tobago combined. Only 40% of the wastewater design treatment capacity of all of the sewage treatment plants operated by WASA is used.

As part of the development of the Lock-Joint System project, which expanded CBD to Greater Port of Spain, Arima and San Fernando, there were several issues due to the omission of key services in the contract, such as road reinstatement services. As a result of the implementation and public relations challenges, GoTT was not willing to engage in a large expansion of the wastewater system. As a result WASA provided its own sewer and packaged plant system. The initial intent of the package plants

⁷ No information was provided on the percentage of the other customer types that are metered.

was to allow time for the expansion of the CBD system to other areas; however there was only one such expansion. Due to poor design and poor records of maintenance, the majority of the 200 package wastewater treatment plants do not function, which results in untreated or partially treated effluent to flow into streets and other water sources; some of which are a source of raw water for WASA's water system. Currently the expansion of the sewer system is critical to reducing pollution to the natural resources and achieving the operation plan. In this effort, WASA has acquired some existing treatment facilities that were owned by the Housing Development Corporation and is building a new treatment plant to serve approximately 365,000 people in the Greater Port of Spain area.

Planning and Financing

WASA financial performance, based on the 2002 to 2006 financial statements, is poor due to low operations and maintenance efficiency, low tariffs and collection efficiency and limited capital investments. Some relevant financial performance indicators are summarized in the table below.

# Indicator Baseline	Baseline
Coverage of Operating Expenses (%) <i>Calculated as: Revenues from tariffs divided by O&M + Dep. Cost</i>	44%
Coverage of Operating Expenses (in %) <i>Calculated as: Revenues from tariffs divided by O&M</i>	48%
Coverage of Operating Expenses (in %) <i>Calculated as: Revenues from tariffs plus Government Subvention divided by O&M + Dep. Cost</i>	141%
Net Operating Income (in '000 TT\$)	-702,570⁸
Days Receivables	405

Over the 2002 through 2006 period, there has been a steady decrease in WASA's financial performance with the following: (1) Operating Ratio increased from 167% in 2002 to 225% in 2006; (2) Current Ratio increased from 0.23 in 2002 to 0.65 in 2006; and (3) Increase in debt burden, with a total of \$5.3 billion dollars being finance by the GoTT during this period.

WASA has established a special unit to manage the Five Year Investment Programme (FYIP). The group has successfully implemented over 500 small and medium sized projects. However the group does not have the resources to assess the feasibility and prioritize projects for inclusion in the FYIP, along with capturing the lessons learned from the projects that were implemented.

⁸ Exchange rate of TT\$6.2 = US\$1.

In order to achieve the sector goals by 2010, GOTT established 6 major initiatives. These are: (a) the "aggressive implementation" of a universal metering programme to improve the commercial and financial performance of WASA and, as a demand management measure, to encourage the conservation of water; (b) the establishment of five new desalination plants in Point Fortin, Chaguaramas, Ortoire/Mayaro, Point Lisas and Tobago and the expansion of the existing plant in Point Lisas; (c) the construction of a new national water transmission and distribution pipeline network with a view to WASA having the option to distribute water from any production facility in the network to an area where there might be a shortfall; (d) the construction of a new dam in Moruga, with a storage capacity of 20 MCM and a production of 100,000 CM/day; (e) the expansion of the Arena Dam from a storage capacity of 40 MCM to 56 MCM, and an increase in production of water from the Caroni 300,000 CM/day a day to 500,000 CM/day; and (f) supplying the industrial sector with effluent from the Beetham Wastewater Treatment Plant.

IV. STRATEGIC PLANNING ACTIVITIES

Based on the identified and prioritized challenges, the following key strategic activities were developed for the Sector, as summarized below.

Priorities of the Strategic Plan

Water and Sanitation
<p>(a) Short-Term Needs⁹</p> <ul style="list-style-type: none"> • Assist WASA with the funding gaps in FYIP and other projects proposed by WASA with urgent consideration being given to assistance in: (1) financing the Tobago Southwest Environment Project; and (2) solving the problems posed by the 200 packaged plants through the extension of the central sewerage system in some instance and the rehabilitation of the plants for others. • Address deficiencies in WASA's project management efforts, including technical assistance for the development of project preparation and selection, contract administration and project evaluation procedures. This effort would focus on the special unit that is responsible for managing the FYIP.

⁹ In December 2009 the Bank approved a Technical Cooperation for the preparation of a wastewater rehabilitation program. The objectives of the program are: i) preparation of an Action Plan to rehabilitate approximately two hundred 'orphan' private WWTPs that are mal-functioning or abandoned; and ii) review and provide recommendations for the improvement of the institutional arrangement for the wastewater sector. The long-term goal is have a loan approved by 2011 to implement the results of the program.

Water and Sanitation

(b) Medium-Term and Long-Term Needs

Over the needs in the medium-term and long-term will be driven by the master plan. IDB can assist with funding eligible projects for financing studies and/or project loans. Some of the eligible projects that are expected to be included in the master plan are:

- Expansion of the Caroni Dam, water treatment plant, storage reservoirs and associated transmission mains;
- Development of the Moruga Water Supply Project and associated water treatment plant, storage reservoirs and transmission mains; and
- Institutional development including staff reduction, decentralization, PSP and consumer protection, particularly with respect to water quality management.

V. SERVICE PROVIDER PERFORMANCE INDICATORS

The following performance indicators were summarized for WASA's system.

Performance Indicator	Sector	Years							
		1995	1996	1997	1998	1999	2000	2001	2002
Non-Revenue Water (%)	W	45	45	45	45	45	45	45	45
Employees per 1,000 Connections	W & WW	16	15	15	12	11	10	10	11
Water Production (MCM)	W	249.1	255.1	276.8	280.6	281.8	310.4	304.9	346.7
Operating Balances (%)	W & WW	na	76.9	47.6	50.0	66.7	62.5	62.5	47.6

Notes:

¹ na – No information available.

² W – Water and WW - Wastewater

5 National Wastewater Revolving Fund - Guyana

5.1 Introduction

Current situation in the Guyana sanitation sector is grim. According to the 2006 Guyana Multiple Indicator Cluster Survey Report, 52% of the population uses pit latrines, while only 43% are connected to the sewer system. The Georgetown sewerage network, a conventional sewerage system constructed between 1924 and 1929, was originally designed for 10,000 residents. However, the population has since reached more than five times its designed capacity, resulting in the limited performance of the system. The system consists of 24 sewerage basins each draining to a dedicated pumping station that deliver the untreated flows into a common ring force main before discharging it through an outfall at the mouth of the Demerara River.

Overall the sewerage system is characterized by poor performance, frequent sewers blockages, interrupted operation of the pumping stations due to mechanical and electrical problems, and poor Operation and Maintenance (O&M). These problems lead to increase risk of wastewater overflows into the drainage canals, especially during the rainy season, adding to the problems associated to floods and the public health risks for Georgetown's residents.

The IDB has established a long-term relationship with the Government of Guyana (GOG) in the water and sanitation sector, including the financing of a Master Plan, approved in 1990 and completed in 1994; *Remedial Maintenance for Georgetown Sewerage and Water Supply System*, approved in 1993 and completed in 2002. Currently, the IDB is supporting the GOG through the *Georgetown Water Supply and Sewerage Program II*, completed in June 2010. These projects focused mainly on the improvement of the water supply system, financing only the urgent rehabilitation and replacement of the sewerage pumps and pump stations.

Further, the IDB is currently financing several technical assistance projects, including *Preparation for the Water and Sanitation Upgrade Program*, through which the 1995 master plan will be updated and will produce detailed designs, estimates, specifications and drawings for the rehabilitation of the sewerage system; and *Support for Preparation of Water Sector Program*, aimed at strengthening GWI's financial and institutional management.

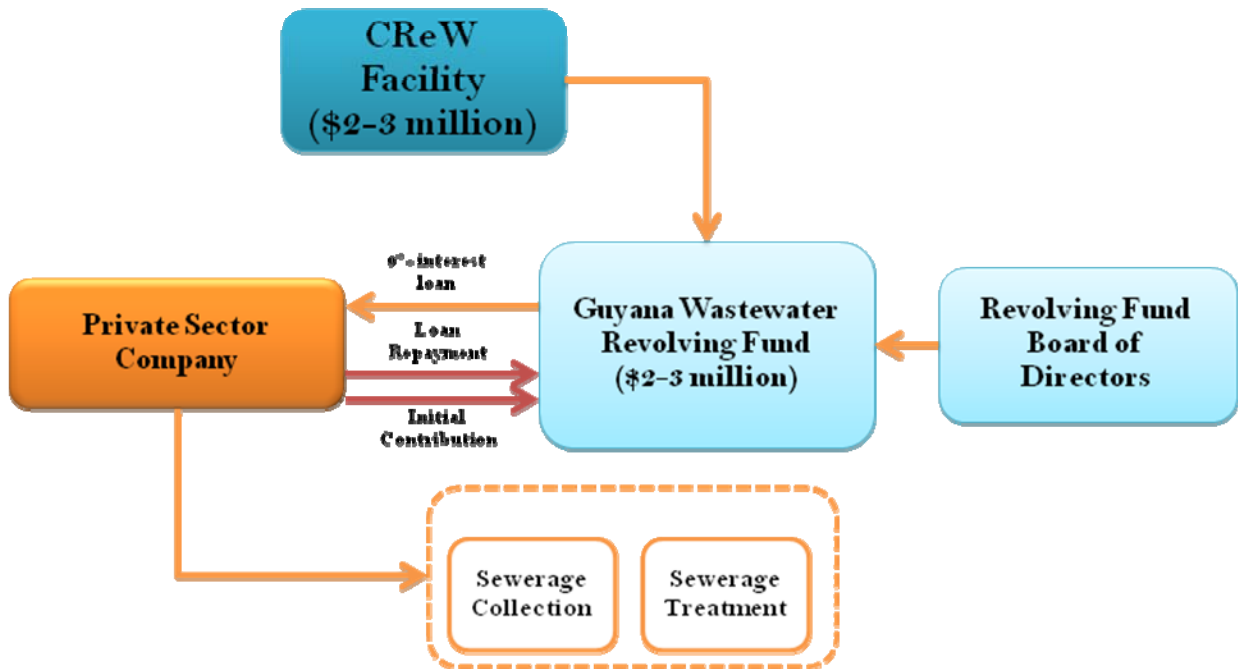
The CReW **will be linked with an US\$9.6 million IDB-financed loan** that is undergoing preparation in parallel – the *Georgetown Sanitation Rehabilitation Project*. The proposed loan is for US\$9.6 million and aims to improve the sanitation infrastructure in Georgetown as well as the capacity of the water utility, GWI to manage and maintain its water and wastewater networks. Specific activities include: (i) rehabilitation of the sewerage mains; (ii) rehabilitation of the street sewers and manholes; and (iii) rehabilitation of yard and collecting sewers (house connections).

5.2 Financing Mechanism

5.2.1 Description

Conceptually, a revolving fund would be established to support the efforts of the GOG to finance improvements in the wastewater sector in Georgetown. Currently, only two sewerage systems exist in Georgetown, which only serves 54,000 people out of a population of 175,000. In areas not served by the sewerage systems in Greater Georgetown, wastewater disposal is by septic tanks and pit latrines with more than 90% of the housing units served by septic tanks. Conceptually, the establishment of a Guyana Wastewater Revolving Fund (GWRF) would allow for the financing of a variety of wastewater solutions through both public and private channels. Due to the rising participation of the private sector in infrastructure development, it is the hope that the pilot GWRF would be a flagship under the CReW in demonstrating how public-private participation can be utilized in development of wastewater infrastructure.

Figure 5-1: Schematic of the Proposed National Revolving Fund



5.2.2 Administration

Institutionally, the responsibilities for the water sector in Georgetown are delegated to the Guyana Water Incorporated (GWI). The GWI was established in 2002,

resulting from the merger of GUYWA¹⁰ and GS&WC¹¹, and took over on the responsibilities previously divided between GUYWA and GS&WC.

The administration of the GWRF will be overseen through the establishment of a Board of Directors, to be headed by the Ministry of Housing and Water, with participation from the GWI, the Ministry of Finance and appointed representatives from the private sector. The final administrative arrangement will be determined through further discussions with the GOG, but will maintain the conceptual framework and will be guided by the engagement of all relevant agencies and entities.

With regard to projects management by CReW funding, the Board will:

- Maintain and provide financial and project information for use by the IDB and GEF in the conduct of annual, mid-term and final reviews as required by the IDB and GEF.
- Maintain technical review and inspection procedures to ensure technical integrity of eligible project financed through the WRF program.
- Maintain all staffing, hiring, training, etc., required to adequately staff and otherwise administer the WRF program.
- Maintain such files and other program and project records as may be required to:
 - document compliance with any general and special conditions of this IDB/CReW grant agreement
 - produce the required annual reports, mid-term and final evaluation studies required by the IDB and GEF,
 - document the technical and financial review and decisions on each project,
 - support audits, and
 - provide effective and efficient program management.

¹⁰ The Guyana Water Authority (GUYWA) was established under the Guyana Water Authority Act of 1972. GUYWA was responsible for delivering water to the suburban, Rural and the Hinterland regions. Its main activities included the construction, operation and maintenance of water distribution systems in order to supply potable water to the public. Prior to the establishment of the Authority, responsibility for the water sector was that of the Pure Water Supply Division of the Ministry of Works.

¹¹ The Georgetown Sewerage and Water Commission (GW&WC) was established in 1929 to complete the Georgetown sewerage works. Its objectives were to establish a body of Commissioners to control maintain and manage the sewerage system and waterworks of Georgetown. GS&WC was responsible for Central Georgetown. The Georgetown Sewerage and Water Amendment Act of 1994 turned GS&WC into an autonomous public sector institution under the control of the Minister of Works and Communications

5.2.3 Eligible projects

Eligible projects would include any public or private sector initiatives that will contribute towards the advancement of goals under the Cartagena Convention and are located in a watershed area that drains into Caribbean coastal waters.

5.2.4 Exit Strategy

This will be determined based on the final design of the financial structure.

5.2.5 Current Status

At the moment, relevant ministries are reviewing the proposed alternatives for the use of the CReW funds.

5.2.6 Next Steps

- Reach agreement with the GOG on the preferred option
- Draft necessary documents to implement the preferred option

5.3 First Generation Projects.

5.3.1 Overview

In recent discussions with the GOG, specific first-generation project will involve the participation of the largest beer brewery in Guyana, Banks DIH, with the installation of a wastewater treatment plant to ensure that all discharges from the production process into the rivers and streams are environmentally acceptable and conforms to all government requirements and EPA regulations. The proposed wastewater treatment plant is envisioned to be constructed in a modular fashion as to allow for expansion of wastewater treatment into the surrounding areas, which currently consists of a mixture of residential and industrial occupants, and will contribute directly to the expansion of wastewater services in the Greater Georgetown area. The first modular unit is estimated to cost upwards of US\$1 million. Other conceptual frameworks for the first generation projects include the participation in the Marriott hotel and resort development project, as well as the formalization of the septic tank management and establishment of regulation for the collection and disposal of sewage for non-sewered areas in Georgetown

5.3.2 Banks DIH Wastewater Treatment Plant

The Coca-Cola Company Worldwide (CCC), which globally produces and provides beverages, has continued carrying out initiatives for sustainable use of water resources as part of its corporate social responsibility. With the rapid changes taking place in the earth's environment in recent years, the company has set itself the goal of becoming a global leader of water resources management by the year 2015.

Since the year 2004, the CCC has globally implemented the “Water Stewardship” strategy, which strategically promotes the three actions of reducing the water used to produce its beverages, recycling water used for beverage manufacturing processes, and replenishing water in local communities and nature. In Guyana, this has translated into the extension of the responsibility of Banks DIH, which is the bottler partner for the CCC. Table 5.1 is the wastewater discharge quality standards that have been set by the CCC.

Based on this strategy, Banks DIH has improved the environmental performance at its plants and proactively carried out water environment conservation activities, and more recently, wastewater management. The overall objective for Banks DIH is to recycle the water used in the operations and to return all the water we use in our manufacturing processes to the environment at a level that supports aquatic life by the end of 2010. In order to achieve this, water used in the operations is recycled through a wastewater treatment process. This ensures that the quality of the wastewater meets or exceeds applicable laws and regulations before being released back into the environment. Treated wastewater can also be used to water plants for utility purposes in boilers, evaporators and chillers and outside for landscape irrigation and dust control, which in turn reduces the use of additional water sources.

Table 5.1: Coca Cola Company - Wastewater Discharge Quality Standards

2008 WASTEWATER DISCHARGE LIMITS¹ (mg/L = milligrams per liter)	
	Maximum Concentration (unless local limits are lower)
5-Day Biological Oxygen Demand	50 mg/L
pH Level	6.5–8 mg/L
Total Suspended Solids	50 mg/L
Total Dissolved Solids	2,000 mg/L
Total Nitrogen	2–5 mg/L ²
Total Phosphorus	2–5 mg/L ²

¹ These are six of the 20 water quality parameters established for the Coca-Cola system.

² Depends on receiving stream water conditions

5.3.3 Marriott Hotel and Resort Wastewater Treatment Plant

Marriott International Inc. (MI) announced that it will open its first Marriott-branded hotel in Georgetown in 2013.

It will operate under a management agreement with Atlantic Hotel Inc (AHI), which is currently owned by the GOG as part of a public-private partnership between the GOG and private sector investors.

The project will be more an integrated entertainment complex ideally located at the corner of the Atlantic Ocean and Demerara River with a casino, night club, restaurant, and boardwalk. The project will also be Marriott's first Leadership in Energy and Environmental Design (LEED) certified hotel in the Latin America and Caribbean region, to be inspected and certified by the US Green Building Council.

5.3.4 Current Status

Banks DIH has progressed with the costing and the detailed design of the wastewater treatment plant and the project is ready for implementation.

The Marriott hotel development has just been confirmed in late June 2010. As the development will be LEED certified, the wastewater treatment plant will play an essential role in Marriott's compliance with the stringent certification standards.

It should be noted that these are potential first generation projects. The decision on the final first generation projects will be made following the selection of the financing mechanism structure.

5.3.5 Next Steps

- Banks DIH Limited to submit correspondence to the IDB indicating an interest in accessing the Funds
- arrange a joint meeting with the Minister of Housing and Water and representatives of Banks DIH Limited
- Establishment of the Board to manage and administer the GWRF and development of relevant policies and regulations.

5.4 Annexes

Annex A. GWRF Operations Manual

Annex A –GWRF Operations Manual

This Operations Manual (OM) describes the objectives, structure, and procedures of the GWRF program to remain in effect during the life of the IDB/CReW Grant Agreement with the Government of Guyana (GOB). It outlines how the BWRf will conduct business and comply with the basic tenets of the IDB/CReW program, including schedules for review by and reporting to IDB and the Global Environment Facility (GEF).

General Eligibility. The GWRF programs may provide assistance to all publicly- and privately-owned community water systems or nonprofit water systems. Nonprofit systems may include school systems, day care centers, churches, or retreat centers.

General Project Categories. GWRF assistance is provided for projects that address a current violation or will prevent a future violation of wastewater discharge standards as established by the GOB and reduce untreated wastewater discharge into coastal waters.

Consolidation of Supplies. Consolidation projects refer to the consolidation of wastewater systems when a system can no longer maintain compliance due to a lack of proper technical, financial, or managerial capacity.

Creation of New Systems. GWRF programs may fund the development of new wastewater systems to address current public health concerns or consolidate existing systems that face technical, financial, or managerial capacity challenges. Projects that authorize the creation of a new system are limited to the specific geographic area affected by contamination as determined by the appropriate GOB government agency. Projects to consolidate multiple facilities are limited to the current service areas for wastewater systems. For all consolidation projects, applicants must ensure that consolidated systems will maintain compliance with all BWRf requirements.

Project Requirements. When funding these types of projects, the GWRF must determine that the applicants has provided sufficient public notice, considered alternative solutions, and is implementing the most appropriate and least-cost effective solutions. All projects shall be demand-led and must have the written sponsorship of the local government or private sector borrower. All projects shall be subject to a sit visit by GWRF staff or a qualified consultant to verify that the selection criteria are met, or otherwise, and report their findings to the meeting of the full GWRF Board.

Eligible Project-Related Costs. The GWRF may also fund some types of additional costs necessary to fully implement an eligible project. These additional costs must fall within one of the following categories:

- Costs for land acquisition that are integral to project implementation,
- Costs related to project planning, design, and other pre-project costs, and

- Costs related to system restructuring activities

Technical, Financial, and Managerial Review (TFM). GWRF loan recipients must pass a full TFM review. In addition to demonstrating that the system can maintain compliance based on technical and managerial activities, they must also demonstrate an acceptable level of financial management, including the ability to repay the GWRF loan and maintain acceptable facility operations. If a system does not have adequate TFM capacity, they may only qualify for assistance if the assistance will target a specific area of noncompliance or if the system agrees to develop a formal plan to make the appropriate changes necessary to improve compliance. In some cases, it may be determined that the project is not ready to proceed. In those instances, GWRF should provide available and appropriate technical assistance to resolve identified TFM issues.

Environmental Review Procedures General Requirements. All projects receiving assistance through the GWRF must pass an environmental review to evaluate possible negative environmental outcomes as a direct result of project assistance. The GWRF must conduct this review on all projects receiving GWRF assistance unless the activities solely involve administration (e.g., personnel, equipment) or technical assistance.

Financial Assessment of Program Recipients. Prior to awarding a loan for project assistance, the GWRF program must perform an assessment of all potential borrowers to ensure creditworthiness. This process may be conducted by GWRF staff or conduct these reviews with the assistance of local financial institutions, such as banks, or with the help of outside contractors. Each borrower must demonstrate adequate revenue or security to repay a GWRF loan. The evaluation of creditworthiness is used to ensure both public and private borrowers maintain sound financial management and possess the ability to repay a GWRF loan.

Public Borrowers: Approving a Dedicated Repayment Source. When working with public borrowers, GWRF staff may review audited financial statements and discuss types of revenue sources the entity may dedicate to the repayment of a GWRF loan. For example, revenue sources may include a pledge of additional revenues collected through user fees. Public systems must also demonstrate the appropriate ability to collect revenue according to Belize law and/or local ordinances. The GWRF may require a priority mortgage and/or lien position on the assets financed with the GWRF loan proceeds.

Private Borrowers: Establishing Adequate Security. Working with private borrowers often requires more creativity on the part of GWRF staff in determining creditworthiness and financial capability for loan repayment. Private borrowers may include privately-owned community or nonprofit non-community wastewater systems. When working with private borrowers, GWRF will be required to ensure the recipient of GWRF assistance has adequate security for a GWRF loan. For example, GWRF staff may review income tax statements when audited financials are not available. When adequate security cannot be easily established (e.g., through company assets or other revenue sources), GWRF programs may require unique

collateral arrangements or may explore other options in credit enhancement for the applicant. The GWRF may use several types of collateral arrangements, including the establishment of a debt payment reserve or requiring the purchase of insurance to guaranty loan repayment. GWRF may approve both corporate and personal guarantees of the loan recipient.

Establishing Loan Term. The GWRF shall have the flexibility to offer a wide variety of assistance types and establish unique borrowing provisions for loan agreements. GWRF shall have the ability to set unique interest rates, offer various repayment terms, and assess fees on GWRF borrowers. These types of decisions may affect the growth or ability of the GWRF to provide future project assistance and require a sound approach to financial planning. The GWRF will have the responsibility to balance decisions and adjust loan terms to provide a beneficial subsidy to the borrowing community and to ensure the continued health of the BWRP. For example, a lower interest rate may provide a greater incentive to the individual borrower in the near time, but it will reduce the future income available to the GWRF for additional loans.

Setting the Loan Interest Rate. The responsibility for establishing the effective market rate lies with the BWRP. Any method used to define the current market rate must be defined in the annual report. In addition, when considering rates for loan recipients, the GWRF should not set effective interest rates at a level that may cause the recipient to fail to meet any technical, financial, or managerial capability requirements. In addition, when assessing fees, the GWRF must ensure the effective loan rate (i.e., the loan interest rate, plus assessed borrowing fees) does not exceed the current market rate.

Setting the Repayment Schedule. In addition to establishing loan interest rates for individual borrowers, the GWRF must establish a formal loan repayment schedule in the final loan agreement. Loan repayments to the GWRF program must start within one year of project initiation of operations or when the project is capable of being initiated. In cases where a possible delay in project completion is expected, the GWRF may require the borrower to begin repayment within one year of the estimated date of completion. The GWRF must receive loan repayments on at least an annual basis, although loans may require repayments on a semi-annual or more frequent schedule. After the loan repayment period begins, borrowers must complete all repayments within twenty-five years for standard loans but may extend the term to thirty years (as determined by BWRP) for loans to disadvantaged communities. When providing an extended repayment period to a disadvantaged community, the GWRF must consider how a longer or delayed repayment period may decrease the capacity of the GWRF in providing additional assistance

Setting Repayment Levels. Loan repayments are not required to equal any particular amount. The GWRF may authorize a “balloon repayment” or escalating repayment schedules for GWRF loans. In these cases, the borrower is required to provide higher annual repayment amounts in later years in contrast to lower repayment amounts in the earlier years. Similarly, programs may also allow borrowers to provide interest-only payments for a set period of time, with higher

annual repayment amounts in later years. For all GWRF loans that include interest-only or “balloon repayment” options, the GWRF must provide a discussion of the method for calculating this repayment schedule. The GWRF should recognize the potential negative effects, including an increase in the possibility of borrower default during the later years of loan repayment or the decreased capacity of the GWRF to provide program assistance in the current years.

Determination of Fees. In addition to establishing loan repayment terms and interest rates, the GWRF has the authority to assess additional fees on program borrowers. These charges may include fees assessed annually (e.g., loan maintenance fees) or an assessment of a one-time fee during the loan closing process. Fees may be used for two purposes; funding additional GWRF loans or for GWRF administration activities. The GWRF must document all planned and actual fee activity in the annual report. GWRF may require loan recipients to pay fees directly or allow the recipient to include these charges as part of the loan principal amount. The method of assessing and collecting fees will determine how and for what purposes programs may use GWRF fee revenue. In all cases, fees and interest on fees must return to the BWRP.

Fees Included as a Portion of the Loan Principal. Fees included as a portion of loan principal should return directly to the BWRP. Fees paid directly by the assistance recipient and deposited to the Fund may be used for all eligible GWRF activities, including additional project assistance.

Project Loan Agreements. Following the establishment and mutual acceptance of all loan terms, the GWRF will draft a formal project loan agreement. This agreement shall contain all requirements of assistance from the GWRF program, including the loan interest rate, the loan repayment term, and any applicable loan origination or annual fees. Both the program recipient and the GWRF program office must sign this agreement to ensure all terms are legally binding. A signed loan agreement becomes the formal contract between program borrower and the GWRF. According to a final project loan agreement, project assistance is only provided after the formal loan agreement is finalized and signed by both parties. According to this contract, the GWRF assistance recipient promises to complete the project according to schedule and approved specifications, while the GWRF program office agrees to provide funding assistance on a reimbursable cost basis or approved alternative method.

Project Performance Certification The GWRF shall require all project borrowers to designate a certified project engineer to provide continuous oversight and verification that the project is constructed according to design specifications. Periodic engineering reports are collected by the GWRF program to verify progress according to the original construction schedule agreed to in the final loan agreement. Additionally, the borrower-designated engineer will accompany the GWRF project engineer during formal onsite construction inspections. If a system fails to adhere to the original project completion schedule, fails to meet ongoing compliance provision in the GWRF loan, or fails to show appropriate technical, financial, or managerial capacity, the GWRF is required to enforce remediation requirements. To ensure that assistance recipients take the steps necessary to maintain compliance, the GWRF

may require the adoption of a formal Corrective Action Plan or require a revision to the original construction schedule.

Project Inspections. The GWRF shall use formal onsite inspections of the project site to verify that construction activities are completed in a timely manner, as detailed in the original loan agreement, and according to the original design specifications. The GWRF is required to ensure loan recipients are using GWRF funding for eligible purposes and to lend additional verification for all disbursement requests. The frequency and complexity of formal project inspections may vary project to project. The GWRF may conduct monthly project inspections, or only two inspections of the project site – one after fifty percent of the funds have been released to the borrower and another after construction is complete and before the last cash draw is completed for all remaining reimbursable costs. The GWRF may use in-house project engineers to complete inspections or may work with external field offices.

Onsite Construction Inspections. General activities conducted during a construction inspection include:

- 1) Adequacy of engineering supervision;
- 2) Oversight by wastewater system;
- 3) Availability of construction drawings;
- 4) Compliance with the construction schedule;
- 5) Availability of accounting records;
- 6) Actual payment requests versus payment schedules; and
- 7) Use of appropriate construction practices.

Approving Requests for Reimbursement. The GWRF is required to verify all loan payments and construction reimbursements for eligible program costs only. The general process for approving a GWRF loan disbursement requires an initial review of all invoices and accompanying documentation. After GWRF staff checks to ensure the disbursement request is for an active borrower, an active project, and that the borrower is not in significant noncompliance, the GWRF staff must verify that the funds requested are within the limits set according to the loan agreement. If the level of detail contained within an individual disbursement request is insufficient to allow GWRF staff to verify the release of GWRF funds, the GWRF may request the applicant to submit additional documentation. The GWRF can involve technical staff directly involved in construction inspections to help verify individual disbursement requests. Technical staff can provide additional information on project-approved change orders, work completed since prior inspection, and knowledge of any observed deficiencies. This information can help GWRF program staff to accurately approve individual requests for reimbursement.

Project Completion and Close-Out Final Construction Inspection. After project construction is complete and before final reimbursement funds are released to the borrower, a final construction inspection must be completed. This final inspection is carried out to ensure GWRF funds have been used for eligible purposes and the project is complete according to original plans and specifications and all GWRF

approved change orders. The GWRF staff engineer will complete this final onsite inspection in combination with the borrower-designated project engineer.

Releasing Final Project Funds. Following a final construction review, the loan recipient is provided with all remaining project disbursements according to approved project disbursement requests. The GWRF will hold five percent of remaining loan funds pending final inspection. The purpose of withholding some funds before final verification is to encourage timely completion of the project and initiation of operations.

General Timing and Requirements for Loan Repayment Initiating Loan Repayments. After a project is complete and has initiated operations, the loan recipient is required to begin repayments within one year. All borrower repayments must return to the GWRF (both principal and interest amounts), and all repayments must return within twenty-five years.

Annual Reports The GWRF must submit an Annual Report detailing the GWRF's performance and its compliance with GWRF regulations and IDB/CReW grant requirements. The Annual Report should document the actual activity of the GWRF for the prior year, and describe the GWRF progress toward short term and long-term goals. Reporting also includes detailing the timely and expeditious use of funds, binding commitments and loans executed, and all types of assistance provided. Specifically, the GWRF must demonstrate that it has provided funding to projects consistent with these operational guidelines and it adhered to the IDB/CReW Grant Agreement terms. In addition, the Annual Report should include financial statements and an overall assessment of the financial health of the GWRF.

In addition to demonstrating compliance, the report needs to show which projects satisfy various GOB requirements. The annual report should demonstrate compliance with the specific assurances as stated within the IDB/CReW Grant Agreement. Most importantly, all costs incurred must be eligible for GWRF assistance. The GWRF annual report should illustrate the public health benefits for its activities and progress in achieving outputs and outcomes. In addition to these regular components, the report should also follow-up on previous Annual Report findings and evaluates and other program changes. Reporting requirements will continue to exist along as the GWRF operates.

GEF Mid-term and Final Reports. The GWRF shall work with selected CReW consultants in the preparation of GEF mid-term and final evaluation reports as mentioned in the CReW/IDB Grant Agreement.

Use of the GWRF Performance Indicators. The Annual report shall contain five performance indicator calculations to give the GWRF, the GOB, IDB and GEF a means to track Fund progress and explore initial assessments of overall Fund health. Information should be collected for the following types of performance indicators:

- Return on IDB/CReW investment;
- Assistance provided as a percent of funds available;
- Disbursements as a percent of assistance provided;

- Additional assistance provided due to leveraging; and
- Net return on contributed capital.

Responsibilities of the GWRF Executive Director (ED). The Executive Director will head the GWRF and will be an ex officio member and Secretary of the GWRF Board of Directors. The Executive Director will hold ultimate responsibility for managing project resources and all GWRF staff and supervise the implementation of all projects. The ED shall be responsible for cost control and observation of relevant standards and policies of the GWRF. Specific responsibilities include:

- 1) Reporting to the GWRF Board through its Chairperson and attending all GWRF Board meetings;
- 2) Preparing minutes of GWRF Board meetings, distributing to relevant local stakeholders;
- 3) Evaluating the performance of the staff of the GWRF and reporting to the Board;
- 4) Maintaining a register of all project requests received by the GWRF for reporting to the next scheduled meeting of the GWRF Board;
- 5) Maintaining and update a register of technical consultants and contractors;
- 6) Submitting annual Fund Performance Reports on project implementation to the GWRF Board. These reports will consist of information on the capital cost and expenditure for each project, and actual employment generated by each project;
- 7) Coordinating activities for submission to IDB and GEF of documentation to satisfy the conditions precedent of the Grant Agreement;
- 8) Developing the Annual Work Plan and Budget for the GWRF and presenting the draft Annual Work Program and Budget annually to the GWRF Board;
- 9) Coordinating the preparation of project profiles for the approval by the GWRF Board;
- 10) Ensuring good governance practices, in compliance with IDB policies, in project contracting;
- 11) Monitoring and inspection of project activities;
- 12) Accepting completed projects and as-built drawings;
- 13) Reviewing and approving completed project maintenance plans for GWRF funded projects;
- 14) Accepting inception, interim and final Reports;
- 15) Recommending disbursements based on approved reports; and
- 16) Carrying out post-implementation monitoring of GWRF funded projects.

Qualification of Executive Director. The ED is expected to have at least a Bachelors degree and a minimum of five years experience in project management. Expertise in the management of water and wastewater projects and proficiency in computer skills are prerequisites. It would be advantageous if the ED has demonstrated competence in managing donor-funded programs and the ability to effectively communicate with community groups, Government officials, donors, and private sector representatives.

