

TC Annex
(IDBDocs# 35378050)

Country: Belize. Detailed Design of Wastewater Collection and Treatment System in Placencia (BL-T1048)

Program Name and Number: Integrated Water and Sanitation Programme for the Placencia Peninsula (BL-L1015)

Date	December 1, 2010
Relationship to Loan	Integrated Water and Sanitation Programme for the Placencia Peninsula (BL-L1015 - \$10 million)
Project Team	Lu Shen (INE/WSA), Team Leader; Evan Cayetano (WSA/CJA), Javier Grau (WSA/CDR); Rodrigo Riquelme (INE/WSA), Holly Burton (INE/WSA), Guillermo Antonio Eschoyez (LEG/SGO), Luis Acosta (PDP/CDR), Willy Bendix (PDP/CCR), Carolyn Mahung (CID/CBL), and Catalina Gallego Hernandez (INE/WSA)
Responsible Division	INE/WSA
Executing Agency	The Belize Water Services Limited (BWSL)
Unit of Disbursement Responsibility	CID/CBL
Objective	The goal of the proposed TC is to support economic development and improve the quality of life of the residents in the Placencia Peninsula through environmental improvements. Specifically, the TC will support BL-L1015 in preparing the detailed designs, baseline customer surveys and the public awareness campaigns necessary for the implementation of the wastewater network and treatment facilities, conduct in the Placencia Peninsula.
Description	<p>As a result of tourism growth coupled with the unplanned sewage disposal, Placencia is suffering from the negative impacts of contamination of natural resources and that created increased public health risks. In general, wastewater disposal from all existing residential sources in the peninsula does not meet acceptable industry standards and consists of either direct disposal to the ground from either house laterals or septic tank outlets. Existing wastewater management practices, 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 improvements in wastewater management conditions on the Peninsula.</p> <p>To date the following studies have been conducted related to the potential development of a wastewater system 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). Further, in August 2010, the United States Trade and Development Agency (USTDA) had committed resources to help the Government of Belize verify the EWB study and confirm on the best technology option for the system. However, the follow-on work for details designs and public awareness remains unfunded.</p> <p>To this end, the TC will be instrumental in linking the studies conducted by the EWB and the USTDA and BL-L1015 through (i) preparation of the detailed designs of the proposed wastewater collection and treatment system; (ii) establishment of baseline surveys to ensure accurate monitoring; and (iii) creation of public awareness campaigns to ensure smooth project implementation.</p> <p>More detailed information on the technologies considered to date is included in the technical annex of the POD.</p> <p>http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35377073.</p>

	<p>The higher per capita cost of this project is due to the complexities associated with the implementation of this system, which are:</p> <ol style="list-style-type: none"> 1. High ground water table (1 ft to 3 ft below ground water), which will increase the construction cost and the limit the use of gravity sewers. 2. Service area is spread across a very long but narrow peninsula. 3. Proposed location for the treatment plant is across the lagoon from the peninsula, which requires pumping the wastewater from the peninsula under the lagoon via a forcemain. Given the environmental sensitivity of the lagoon and the fact that water for the peninsula is transported via a pipeline across the lagoon from the mainland, the forcemain must be design to eliminate potential for rupture. In addition placing the forcemain across the lagoon will be more expensive than a typical pipe installation. 4. Preliminary locations for the treatment plant have been selected based on their availability under government ownership; however an assessment needs to be performed to determine the environmental, technical and financial feasibility of the various locations. The most feasible location may not be the closest site to the proposed central pumping station in Seine Bight. This pump station is proposed to pump the wastewater from the peninsula across the lagoon. 5. The Engineers without Boarder Study recommended the pressurize collection system, where neighbors would share pumps; however this approach has several limitation associated with the reliability of neighbors paying elect bills, the capability of the majority of the community to pay for and maintain the pumps. In this area there is a significant disparity between the incomes of the residents; there are poor residents living in the villages, where as there are seasonal residents that have purchased expensive properties in the new developments.
Activities	<p>Generally, the TC will fund for the following themes:</p> <p><i>Sewage Collection, Treatment and Disposal Systems.</i> This component will focus on the detailed design of a collection, treatment and disposal system that will best meets the needs of the Placencia Peninsula residents as well as for operations and maintenance. The outcome of this component will include the costing, technical specifications for the design of the new systems.</p> <p><i>Information Sharing and Monitoring.</i> This component will focus on providing the necessary tools for BWSL to ensure successful implementation of the proposed wastewater treatment system. Specifically, this will entail the implementation of (i) establishment of benchmark surveys to ensure accurate monitoring and (ii) a public awareness campaign for the socialization of the project.</p> <p>Specifically, the TC will finance the following activities:</p> <ol style="list-style-type: none"> 1. Design of wastewater collection systems 2. Design of wastewater treatment plant 3. Customer base survey 4. Baseline surveys for results indicators 5. Public awareness campaign
Expected outputs	<ol style="list-style-type: none"> 1. Detailed survey, design and costing of wastewater collection system completed 2. Detailed survey, design and costing of wastewater treatment plant completed 3. Customer base survey conducted 4. Baseline surveys for results indicators completed 5. Public awareness campaign completed
Expected Outcome	<p>Expected Outcome includes all studies, designs and reports completed under the TC are commissioned to facilitate the implementation for the loan and all of the outputs from the TC will be properly adopted and used for the purpose of BL-L1015.</p>
Timeline	<p>Execution Period – 7 months Disbursement Period - 12 months.</p>
Estimated Administrative	<p>N/A</p>

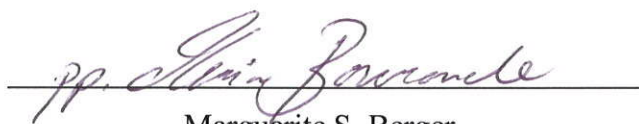
Budget of execution by year of the execution	
Budget	Total Budget: US\$500,000. Link to Detailed Budget http://idbdocs.iadb.org/wsdocs/getDocument.aspx?docnum=35378006
Procurement/contracting plan	Procurement will be carried out according to the policies of the Bank GN-2350-7. Link to Procurement Plan http://idbdocs.iadb.org/wsdocs/getDocument.aspx?docnum=35378006
Conditions for disbursements	The first disbursement of the contribution shall be subject to presentation, to the satisfaction of the Bank, of evidence that the Borrower has completed a study to confirm on the best technology option for the wastewater system to be financed under the Program.
Revolving Fund	N/A
Evaluation	At the end of the project there will be an independent assessment of compliance with the objectives, which will be funded as part of the TC.
Reports	The Executing Agency will submit (i) Monthly progress reports; and (ii) Final report in the last semester of implementation.
Audits	The Executing Agency will select and appoint an independent auditor at the start of the project, based on a list of eligible auditors proposed by the Bank. The external audit will provide an independent assessment of the use of funding resources in accordance with the terms and conditions of the agreements signed.
Terms of Reference	Links to the Terms of Reference http://idbdocs.iadb.org/wsdocs/getDocument.aspx?docnum=35378096

INTEGRATED WATER AND SANITATION PROGRAM IN PLACENCIA

BL-T1048

CERTIFICATION

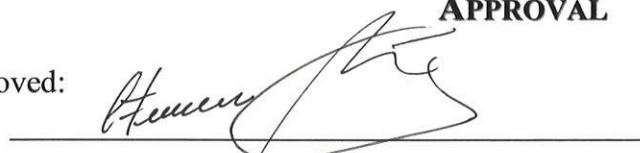
I hereby certify that this operation was approved for financing under the AquaFund (AQF) through a communication dated on October 14 sent by Kai Hertz, VPC/GCM. Also, I certify that resources from the AquaFund (AQF) are available for up to US\$500,000 in order to finance the activities described and budgeted in this document. This certification reserves resources for the referenced project for a period of twelve (12) calendar months counted from the date of signature below. If the project is not approved by the IDB within that period, the reserve of resources will be cancelled, except in the case a new certification is granted. The commitment and disbursement of these resources shall be made only by the Bank in US dollars. The same currency shall be used to stipulate the remuneration and payments to consultants, except in the case of local consultants working in their own borrowing member country who shall have their remuneration defined and paid in the currency of such country. No resources of the Fund shall be made available to cover amounts greater than the amount certified herein above for the implementation of this TC Annex. Amounts greater than the certified amount may arise from commitments on contracts denominated in a currency other than the Fund currency, resulting in currency exchange rate differences, for which the Fund is not at risk.


Marguerite S. Berger
Chief
Grants and Cofinancing Management Unit
VPC/GCM

10/28/2010
Date

APPROVAL

Approved:


Federico Basanes
Division Chief
Water and Sanitation Division
INE/WSA

1/11/2010
Date