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PROJECT DEFINITION REPORTS
EIA PROJECT PAPER TECHNICAL ASSISTANCE
FOR THE
WATER AND SANITATION DISTRICT PROJECT

Prepared for
The Office of Environment and Urban Programs
United States Agency for International Development

By

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PROJECT DEFINITION REPORT FOR WATER AND SANITATION DISTRICTS IN JAMAICA

1. EXECUTIVE SUMMARY

1.1 Recommended Approach

The consultants recommend creating a local water and sewerage authority in the St. Ann Parish with independent operating and cash management responsibilities under a license from the NWC. The District Authority would serve as an institutional model that improves delivery of service, finances capital investments from revenues, and advocates environmental control.

1.2 Project Description

The St. Ann Parish suffers from poor environmental management, lack of water and sewerage services to critical areas, and lack of sufficient resources to adequately maintain the infrastructure. These problems threaten public health, diminish water supplies and adversely impact water quality. This proposal addresses these problems by creating a non-profit organization to manage water and sewerage services in St. Ann Parish and conduct environmental monitoring for the parish's watersheds and aquifers.

The NWC would transfer water and sewerage functions under a license agreement to the Water and Sanitation District Authority. The agreement would clearly identify roles and responsibilities, and set out the requirements for proper operation and maintenance. The District Authority would be formed under the Companies Act of Jamaica and represent a broad range of stakeholders in the parish. It would have the ability to expend funds, incur debt to a preset limit, and to sue and be sued.

A Board of Directors would govern the District Authority, composed of 5 to 15 individuals representing business users, domestic users, and the Parish Council. The Board would delegate responsibility for routine decisions to an executive committee. A mix between permanent and annual seats could compose the Board. Permanent organizations would occupy the former, such as the Chamber of Commerce, Parish Council, Rotary Club, Kiwanis Club, JHTA. Other groups could rotate annually, such as the St. Ann Environmental Protection Association, the College and various professional associations, with particular attention to ensuring representation of Parish areas outside Ocho Rios.

1.3 Evaluation

The license agreement envisioned in this proposal would establish specific performance standards for financial and operational accountability of the District Authority. These standards form a model for: 1) regulation, 2) improved service delivery, 3) capital investment of available local revenues, and 4) environmental advocacy. Local civic leaders have the right incentives to set priorities for proper operation and maintenance of the infrastructure that serves them and to advocate environmental safekeeping.

The attached table outlines the roles and responsibilities that build on the strengths of a local authority and the NWC. This matrix balances local control and accountability with national economies of scale and planning priorities. At Project Activity Completion Date, the District Authority would be operating as a legal entity under an approved license from the NWC. The requisite financial, commercial, and operating systems would be in place.

1.4 Site Selection

The consultants reviewed the viability and potential environmental benefits of institutional strengthening at two sites: Downtown Kingston and Ocho Rios (St. Ann Parish). The evaluation in Annex A demonstrates that both sites are viable and provide significant opportunity to improve delivery of services. However, St. Ann provided the greatest environmental benefit and was chosen for further development. Kingston remains a worthwhile project, and is described in Annex B.

1.5 Implementation Plan

Citizen organizations of St. Ann Parish will designate a Citizen Steering Committee, and later the Board of Directors of the new Water and Sanitation District Authority, that will serve as the project's counterpart. The GOJ will vest the non-profit District Authority with its authorization to operate, through a license agreement with the NWC.

The St. Ann District office of the NWC will continue to operate and maintain the water and sanitation services in the Parish. The Board of Directors of the District Authority will direct this service, following its license agreement. The Corporate and Regional arms of the NWC will continue to provide services to the District Authority, as specified in the license agreement.

The Ministry of Public Utilities and Transport, and when implemented the newly legislated Office of Utility Regulation, will supervise the implementation of the license agreement and future modifications to it.

The RHUDO office of USAID/Jamaica will monitor and guide project implementation. The Mission will contract a single US firm to manage the project, that would sub-contract a Jamaican company to provide most or all of the technical assistance services expected from

local professionals. The US firm will provide a stable set of professionals who can provide continuity and leadership to the project during a series of intermittent, short-term interventions.

The technical managers of the US and local firms and the USAID project officer would guide the project. They will develop agreements and strengthen local capabilities with specific consultant assistance in contracting, asset inventory, financial systems, and planning. The estimated duration of these activities is 24 months. Needing continued technical assistance, the Authority will benefit from a long-term twinning arrangement with a similar utility in the US. The project will provide financing for travel and living expenses during the first two years of this twinning arrangement. The total projected level of effort for the project falls within the allotted budget of US\$ 750,000.

**PROPOSED NWC AND ST.ANN WATER AND SANITATION AUTHORITY
FUNCTIONAL RESPONSIBILITY MATRIX**

LEVEL OF RESPONSIBILITY	FINANCIAL	ADMINISTRATION	ENGINEERING & CONSTRUCTION
NWC	CONTROLS RATES	POLICIES PROCEDURES TRAINING PURCHASING-BULK VEHICLE MAINTENANCE. ROLLING STOCK SOME MAJOR EQUIPMENT	LARGE PROJECT CONSTRUCTION (MOSTLY CONTRACTED OUT)
WATER AND SANITATION AUTHORITY	Financial accounting & reporting Cash management Manage reserves Assume short term debt (working capital) Finance investments within revenue limitations BOOKKEEPING COLLECTION BUDGET PREPARATION. POSSIBILITY AFTER CONSOLIDATION OF MODEL: Setting rates and special assessments, subject to regulator's approval.	Establish Staffing Requirements, (quantity, quality, functions); includes power to hire & fire Hires District's Top Executives Comply with NWC lease requirements (payment for NWC recurrent services and charges for assets) Pay Service Contract (payments for NWC personnel) "Pay as you go" on all consumables Purchasing Most major equipment VEHICLES STORES	PROBLEM IDENTIFICATION Develop capital improvement program, within NWC parameters (utility and environmental functions) Development of appropriate technology approaches to squatters and rural areas Sub-Division Approvals Manage capital works under US\$ 1 M EQUIPMENT SPECS. (OPERATIONS SUPERVISORS)
CODE:	EXISTING FUNCTIONS New functions		

LEVEL OF RESPONSIBILITY	PLANNING	OPERATION	MAINTENANCE	COMMERCIAL / SOCIAL PROMOTION
NWC	STRATEGIES INFORMATION SYSTEMS WATER SYSTEM IMPROV. PROBLEM IDENTIFICATION DROUGHT MANAGEMENT	SPECIALTY ASSISTANCE	SPECIALTY, PUMPS, METERS ELECTRICAL MECHANICAL DISTRIBUTION	PUBLIC INFORMATION OVERSIGHT BILLING Monthly Reconciliations
WATER AND SANITATION AUTHORITY	Watershed Management Plan Coordinate with govt. environ. & regulatory agencies OPERATING PLAN PROBLEM IDENTIFICATION DROUGHT MANAGEMENT	ALL DAY TO DAY OPERATIONS Engineering Support (Hydraulics) Environmental Monitoring Source Water Monitoring Performs delegated inspection tasks	PREVENTIVE & ROUTINE MAINTENANCE/ ELECTRICAL	Customer Relations & Cadaster Complaints Oversight Revenue Protection Billing Data Interface COLLECTIONS METER READING METER INSTALL METER CONNECT NEW ACCOUNTS Community organization & publication campaigns for water conservation and appropriate technology solutions

2. CONTEXT

2.1 Setting for environmental management of water and sanitation.

The St. Ann Parish occupies approximately 300 square miles along the north shore of Jamaica and has a fast growing population that totaled 150,000 in 1990. Ocho Rios, the primary urban center in the parish, has an actively expanding tourist business second only to Montego Bay, and is Jamaica's busiest port for cruise ships.

Several water and sewerage systems that the NWC, UDC and private companies operate individually, serve this actively growing area. The St. Ann Parish Council had responsibility for water in the parish until transferring those responsibilities to NWC in 1985. The government is constructing improvements to the sewerage system in Ocho Rios and has completed water distribution system improvements. The St. Ann District of the NWC serves Ocho Rios and most of the remaining area within St. Ann Parish. It has a staff of 83 persons, divided between Customer Services, Commercial, Operations, and Accounting. Overall, the District has an adequate water supply to meet its needs. However, numerous areas and residents are without adequate water and sewerage service, and some smaller systems suffer from drought. Further environmental degradation threatens the quality and quantity of water supplies and of beach areas and the national tourist attraction Dunns River Falls, that support the fast growing tourist industry.

Water revenues in St. Ann exceed operating expenditures by about US\$ 3 million annually. These surplus revenues pay for corporate NWC functions and provide a subsidy to other regions of NWC.

The area suffers from a fragmented approach to planning, inadequate maintenance and inconsistent environmental monitoring and compliance.

2.2 Government policy

Water and Sewerage Services

The GOJ has several policies and initiatives affecting water and sewerage services and local government. While the GOJ vested the NWC with providing water and sewerage, various different agencies and private parties provide these services in the St. Ann Parish.

The GOJ has initiated a national effort to return control and authority to local governments.

Environmental policy

The GOJ has recognized the importance of environmental protection and management through the Ministry of Environment and Housing and the Natural Resources Conservation Authority (NRCA). The GOJ recently created the Office of Utility Regulation under the Ministry of Public Utilities and Transportation to provide needed regulation. The NRCA does not consolidate all environmental functions; rather, its role is to coordinate and develop national environmental policy and provide a technical resource for regulations and standards. Other key environmental regulatory agencies include: 1) Environmental Control Division (Ministry of Health), 2) Town Planning Authority and Town Planning Department (Ministry of Environment and Housing), 3) Underground Water Authority, 4) Forestry and Soil Conservation Department (Ministry of Agriculture and Mining), 5) Fisheries Division (Ministry of Agriculture and Mining), and 6) Rural Agriculture Development Authority.

These governmental regulatory institutions have been ineffective in environmental management due to the following weaknesses and constraints: inadequate funding, lack of integrated planning, inadequate policy implementation mechanisms, fragmented legislation, lack of standards, lack of reliable data, fragmented and overlapping responsibilities, and weak local governments.

2.3 Institutions and parties involved

The NWC, NRCA and other environmental institutions, residents, businesses (tourism), farmers and the Parish Council are all stakeholders in St. Ann Parish. The persons contacted (see Annex C for a listing), express support for initiating a local Water and Sanitation District Authority as a new approach to provide services and protect the environment.

The project should address a reservation that government organizations have expressed. The NWC, the Ministry of Public Utilities and Transportation and the Parish Council, all have interest in the application of the approximately US\$ 3 million that the St. Ann district generates each year. This surplus results from the population of the town of Ocho Rios and the cruise ships that arrive there being relatively well serviced with both water and sanitation. Opinion varies as to whether this operating surplus should continue to cover NWC operating deficits in other parishes, pay the equivalent of debt service for the works in Ocho Rios or finance investments in other areas of the parish. The license agreement should resolve negotiations on this matter, allow the NWC to address unfunded liabilities and contribute toward government policy formulation.

2.4 Problems in St. Ann Parish to be addressed

The environment is in decline in St. Ann, as it is all along the North Coast. Poor land management and squatters, deforestation and inappropriate agricultural practices are drying and polluting ground and surface water, including in the beach areas and the national tourist attraction, Dunns River Falls. The general decline of water quality in Ocho Rios Bay

documented over the past 20 years, and the slow recovery of coral reefs damaged by the hurricanes in the 1980's, provide examples of the negative trend in environmental quality.

Governmental institutions that deal with these problems are fragmented, uncoordinated, and generally ineffective as environmental managers. These organizations do not have a comprehensive plan or strategy for addressing the environmental problems and trends threatening the environment in St. Ann. The community is generally aware of, and concerned about, environmental degradation. However, no organized effort has emerged to show effective public support and understanding of environmental issues.

Apart from recent and ongoing investments in the town of Ocho Rios, infrastructure is not being expanded to keep up with population growth in St. Ann Parish. Financing has been insufficient. Unsewered areas and unprotected water supplies threaten public health, degrade water quality, and jeopardize the tourist industry. Poor populations can not afford the types of sewers employed in fast growing peri-urban areas. Little is being done to motivate communities to contribute toward maintenance and improvements in their systems.

As a consequence, water and sewer infrastructure is not being maintained adequately in any area. The NWC's insolvency and managerial problems severely constrain its ability to invest in proper maintenance of the infrastructure, adding further risk to the environment. If improperly maintained, the sophisticated sewer treatment and evacuation systems that are now under construction can fall into disuse and fail to remedy pollution in Ocho Rios bay.

2.5 Other interventions and projects

The following interventions will affect water and wastewater functions in St. Ann Parish and may have an impact on the proposed project.

A New sewage treatment plant with European Community financing in Ocho Rios will begin operating in 1996-7. This will increase operating costs, complexities, and revenues.

The government recently passed legislation creating the Office of Utility Regulation. The license agreement between the NWC and the St. Ann Water and Sanitation Authority should serve as an example of the basis that this new regulator will use to perform its much needed functions.

The World Bank is planning a project to support local government. Once underway, this project may affect the organization of the water and sanitation sector.

USAID/Jamaica is undertaking efforts to resolve and upgrade living conditions for squatters in different areas of the island, that can complement the project.

2.6 Available documentation reviewed

Feasibility report for the sewage treatment plant.

NWC 1994/5 preliminary budget and revenues for St. Ann Parish

Environmental Impact Assessment for Ocho Rios Port Expansion

Privatization study for NWC

3. PROJECT INTERVENTIONS

3.1 Goal -- general objective

The goal of the project is improved environmental quality and natural resource management.

This is the Mission's Strategic Objective No.2 for Jamaica.

3.2 Purpose -- specific objectives

The project's purpose is to establish and test a model of district management of water and sewerage in St. Ann Parish, controlled by the community that protects water quality and public health on a sustainable basis.

Two indicators will demonstrate that the project has achieved this purpose:

- The St. Ann Water and Sanitation District Authority operates on a profitable and environmentally sound basis.
- The GOJ and communities elsewhere are considering the establishment of Water and Sanitation Authorities.

3.3 Outputs

The single output of this project is the formation and startup of a locally controlled Water and Sanitation District Authority in St. Ann Parish.

Several indicators will demonstrate that the project achieved this output at Project Completion Date:

1. License agreement with NWC is approved and in place.
2. District Authority is incorporated under the laws of Jamaica and the Board of Directors is in place.
3. General Manager and key staff are hired.
4. Refined organizational structure is in place with unit functions defined including a social marketing officer.
5. Financial systems are in place and personnel are trained to operate the systems.

6. District Authority is managing the water and sewerage systems.
7. District Authority collects revenues, and reconciles account information with NWC monthly.
8. District Authority has a watershed monitoring plan in place and is routinely sampling points of pollution, surface and ground water sources and water quality in beach and other sensitive areas.
9. Public promotion plan is in place and events are held; the public participates in all phases of capital works planning and implementation, and in the oversight of the District Authority.

3.4 Input activities

The project would consist of the following summary inputs:

1) Technical assistance:

13 person months	US, including about 2.5 months that a US utility donates in a twinning arrangement. USAID project finances only travel and living expenses during twinning interchanges.
39.25 person months	Local
3 person months	Chief Executive Officer, to shape the new District Authority before its startup.

2) Limited commodities purchases:

\$45,000	Computer Hardware
\$40,000	Computer Software
\$ 8,000	Office Furniture and Equipment

3) Counterpart contributions:

Office and administrative support for advisors (from Chamber of Commerce and NWC)

NWC contribution to needs assessment, information & financial systems development, organizational restructuring, asset inventory and capital planning.

Participation in twinning, about 2.5 person months from St. Ann authority, community and NWC.

Project activities focus first on establishing the license agreement and contracts that define the transfer of water and sewerage responsibilities from the NWC to the District Authority. Following implementation of the license, the work provides the necessary strengthening of the District Authority to carry out those responsibilities. The general approach relies on a US firm to manage the project through intermittent Technical Advisors and home office support, and a subcontract with a local firm that provides a number of consultant specialists.

Task 1 Project Planning and Supervision

Technical Advisors will support the St. Ann Citizen Steering Committee. They will provide all staff support needed for planning and organizing the St. Ann Water and Sanitation District Authority and designing the license with the NWC. They will implement the strengthening activities needed to ensure the Authority can accept the transferred duties of the NWC. These persons are critical to the success of the project. Two US advisors, backed by their company’s ongoing technical support, will provide respective leadership in the fields of organization/ finance and engineering/ operations and maintenance. The manager of a Jamaican consultancy with its own technical support, will provide continuity in on-site supervision and in promoting the project.

The duties of the US firm and its Technical Advisors include project management, communications, and technical evaluations of consultant products. Their technical input to the project includes license agreement negotiations, financial systems, organizational and facility assessment, and social marketing. These persons need to have considerable expertise in utility management, financial systems, and operational protocols. The principal local Technical Advisor will manage all local personnel, maintain close relations with GOJ and direct the management consulting and information systems aspects.

The Citizen Steering Committee would recruit the General Manager of the District Authority early, so as to give this professional about 3 person-months before initiation of the entity to work on shaping its organization.

Duration: 22 months	Person-months: 20.25
US Management and Engineering Advisor	3.75
US Finance and Organization Advisor	4.0
US Contractor Technical Support	2.0
Local Management and Information Advisor	4.5
Local Contractor Technical Support	3.0
Chief Executive Officer	3.0

Task 2 Needs Assessment of NWC District Office and Development Plan of new Authority

One of the initial steps in defining the terms of a license is to assess the capabilities and shortfalls of the existing operational unit of the NWC in St. Ann. The assessment would formulate a business plan, projections and preliminary organizational structure for the District Authority. That structure will include the conformation of a Board of Directors that represents the various areas and groups within St. Ann Parish. These elements will serve as the basis for negotiations to structure the new District Authority's relations with government and the NWC.

This would be an intensive review by a team of experts in engineering, operations and maintenance, organization, finance, information systems, water resource management and community/social marketing. The NWC would provide considerable assistance in conducting this intense review. Leaders of local organizations will recommend the way to conform a representative Board of Directors. The US and local advisors who participate in the project will be able to consolidate their team approach as well as to formulate and coordinate their work plans.

Duration: 2 months

**Person-months: 7.25
(excluding time of NWC)**

Note: Estimated person-months in this and following tasks include time of the US Technical Advisors and the local Senior Management Advisor.

US Management and Engineering Advisor	1.0
US Finance and Organization Advisor	1.0
Local Management and Information Advisor	0.75
Local Financial Management Specialist	0.75
Local Information Systems Design Specialist	0.25
Local Engineer Operations and Maintenance	0.75
Local Engineer Capital Works Planning	0.75
Local Watershed Monitoring Specialist	0.75
Local Community/Social Marketing Specialist	0.75
US twinning evaluator	0.5
Legal Advisory Services	

Task 3 License Agreement

The development of a fair and achievable license agreement is the cornerstone of this project. The Technical Advisors and local Management Advisor will lead this effort supported by experts in finance and engineering, and with legal assistance. This task also relies on the assessment and development work in other related tasks (2,4,5,7,8 and 9).

Duration: 8 months

Person-months: 6.5

US Management and Engineering Advisor	1.0
US Finance and Organization Advisor	1.5
Local Management and Information Advisor	1.5

Local Financial Management Specialist	0.25
Local Engineer Operations and Maintenance	0.25
Local Engineer Capital Works Planning	0.25
Local Community/Social Marketing Specialist	0.25
Chief Executive Officer	0.5
Twinning interchanges	1.0
Legal Advisory Services	

Task 4.0 Human Resources/ Organizational Plan

This task is necessary to refine the organizational structure, review processes, prepare job classifications, and conduct required executive recruitment. Candidates for the executive positions in the new District Authority would be identified as early as possible, giving the General Manager opportunity to participate in preparations during at least 3 person-months. The scope of work also includes training through a twinning project with a similar utility in the US.

Duration: 12 months

**Person-months: 6
(plus 1.25 assessment)**

US Management and Engineering Advisor	0.25
US Finance and Organization Advisor	0.25
Local Management and Information Advisor	0.25
Local Financial Management Specialist	0.25
Local Organization and Methods Specialist	3.0
Personnel Specialist	0.5
Chief Executive Officer	0.5
Twinning interchanges	1.0
Executive Search Services	

Task 5 Information System Design

The District Authority will require a significant investment in information systems to manage purchasing, stores, and finances. This task would provide the conceptual system design and identify potential software and hardware packages that respond to the District Authority's needs. This work would be accomplished early in the project to provide input into the license agreement negotiations. It will identify the best options available on the market for both hardware and specialized software.

Duration: 2 months

**Person-months: 1.25
(plus .75 for assessment)**

US Finance and Organization Advisor	0.25
Local Management and Information Advisor	0.25
Local Financial Management Specialist	0.25
Local Information Systems Design Specialist	0.5

Task 6 Purchase of Information Hardware; and
Task 7 Financial System Design/Implementation

This task involves the detailed procedural and system development that then forms the backbone of the District Authority's business operations and provides the actual software and hardware. These activities would produce working systems and detailed procedures on how District Authority would conduct business. The following areas would be included: billings and collections; purchasing and stores; financial/administrative systems including accounting, cash management, budget, personnel; operations and maintenance controls and records. In addition, the work would include extensive training so that District Authority personnel use the systems developed.

Duration: 17 months

Person-months: 14.5

Essential Hardware and Software to be included.

US Finance and Organization Advisor	0.75
Local Management and Information Advisor	1.25
Local Financial Management Specialist	3.0
Local Information System Analyst(s)	8.0
Twinning Interchanges	1.5

Task 8 Fixed Asset Inventory

The fixed assets for water and sewerage of the St. Ann Parish are poorly documented. A critical step in assuming responsibility for operation and maintenance and to develop a responsive investment plan, is to determine the condition and extent of the facilities. This work would focus on the above ground structures and equipment, and make a general approximation of the underground assets, primarily pipes and wells. The Technical Advisor would supervise this work, which a qualified technician will undertake with the assistance of the NWC.

Duration: 6 months

**Person-months: 3.25
(plus 1 for assessment)**

US Management and Engineering Advisor	0.75
Local Engineer Operations and Maintenance	2.0

Task 9.0 Capital Planning

This task provides an initial road map of capital investments based on the inventory and identified needs for use in developing a reasonable license agreement. In addition, it would provide an outline for future capital planning and train the technical staff in preparation of a 5 year capital plan. An engineering consultant experienced in capital planning, will perform this work.

Duration: 6 months**Person-months: 3.25
(plus 1 for assessment)**

US Management and Engineering Advisor	0.75
Local Engineer Capital Works Planning	2.0
Chief Executive Officer	0.5

Task 10 Watershed Monitoring Plan

Considering existing maps and coordination with regulatory agencies and land owners, consultants will prepare a field sampling and monitoring plan that establishes a baseline for environmental monitoring of the watersheds in St. Ann Parish. The plan will allow for monitoring changes in land use and land management practices as well as measuring the quality and quantity of the parish water resources. Monitoring would cover package sewer plants, squatter area assessment, and other pollution points such as fertilizer abuse, deforestation and dump sites. A US consultant and a local specialist will work jointly on this task. Whenever possible, the project will gather baseline data that documents the status of environmental conditions that exist at the onset of the District Authority.

Duration: 6 months**Person-months: 3.5
(plus .75 for assessment)**

US Environmental Monitoring Advisor	0.75
Local Watershed Monitoring Specialist	1.25
Chief Executive Officer	0.5
Twinning Interchanges	1.0

Task 11.0 Social Marketing Program

One of the primary goals of this project is to improve public awareness, provide for public participation in the Authority and in the planning and implementation of projects. The District Authority must develop and execute a social marketing program to achieve

awareness and participation in the formation of the District Authority and its operations. A consultant experienced in public participation and social marketing, would assist the Authority to form a unit and train its personnel. The Authority may incorporate this person in its staff at the conclusion of the project.

Duration: 12 months

**Person-months: 3.75
(plus 1 for assessment)**

US Finance and Organization Advisor	0.25
Local Community/Social Marketing Specialist	3.0
Chief Executive Officer	0.5

Task 12.0 Twinning

A long-term institutional partnership is proposed between the District Authority and a counterpart utility in the U.S. This partnership would supplement technical assistance and institutional capacity building to the District Authority. The U.S. utility will provide on-site technical assistance and training, on-the-job training in the U.S. for selected Authority staff, and ongoing information exchange. It does this without charging honorariums. USAID/Jamaica will finance travel and living expenses of exchanges between the U.S. and Jamaican utilities.

The proposed twinning partner is the Department of Public Utilities of Hillsborough County, Florida. This utility received an USEPA award for Outstanding Operations and Maintenance, employs water conservation and reuse plans and has a recognized watershed management program with extensive community participation. See Annex D for details.

Duration: 22 months

**Person-months: 5
(See distribution above)**

4. Implementation Plan

4.1 Implementation Responsibilities

Water and Sanitation District Authority: The project's counterpart at first will be a Citizen's Steering Committee, followed by the new Water and Sanitation District Authority when this is established. Many permanent organizations will take part in the Steering Committee and the Board of Directors of the new District Authority. They include the St. Ann Chamber of Commerce, Parish Council, St. Ann Citizens Committee and other permanent organizations that represent different areas of the Parish and economical strata of its society. The Chamber of Commerce is expected to take the lead in forming the Steering Committee, that will eventually serve as the nucleus of the Board of Directors.

The Board of Directors of the District Authority will be vested with full power to act autonomously under its license agreement with the NWC. It will operate, maintain and construct water and waste water services in those areas of the Parish where the NWC currently operates, and in other areas as it agrees with relevant authorities. The Board of Directors may elect alternative forms of managing the District Authority in the future, as for example, associating with private investors or utility management companies.

NWC: The St. Ann District office of the NWC will continue to operate and maintain the water and sanitation services in the Parish, under the direction of the District Authority's Board of Directors. As such, it and the Board of Directors will receive technical assistance and limited commodity purchases from the project. The Corporate and Regional arms of the NWC will continue to provide services to the District Authority, as specified in the license agreement. The District Authority will compensate the NWC for these services, either on a "pay-as-you-go" basis or as part of a standard monthly fee.

GOJ: The Permanent Secretary of the Ministry of Public Utilities and Transport is at present the project's contact person and coordinator with the GOJ. He or his designate will be in charge of coordinating policies with other GOJ institutions, including the NWC and the NRCA. His Ministry and the recently legislated Office of Utilities Regulation, will supervise the implementation of the license agreement between the NWC and the new District Authority, and future modifications of that agreement.

USAID/Jamaica: The Mission's RHUDO office will assign an official the responsibility to monitor and guide project implementation. Mission resources will finance this individual.

4.2 Technical Assistance Contractor

Institutional options for providing technical advisory services must comply with several objectives. The project needs leadership and continuity. Management must be attuned to conditions in Jamaica. The new District Authority must have effective management from

its initiation. Falling within the project agreement with the Environmental Initiative for the Americas, the project calls for a two-year implementation timeframe. It should begin during the fall of 1995.

USAID/Jamaica reviewed the merits and drawbacks of various options for implementing the project, in order to select one that can best fulfill these objectives. The alternatives included hiring a full time individual under a personal service contract who would contract a number of professionals or one or more Jamaican firms; hiring a single Jamaican company; hiring a US company; or combinations of these options.

The preferred option is to award project management to a US firm that would sub-contract a Jamaican company to provide most or all of the technical assistance services expected from local professionals. The project requires a multi-disciplinary team approach that a company is best suited to manage, rather than burdening USAID/Jamaica with excessive administration of individual contracts. The combination of US and Jamaican companies will provide continuity and local presence to the project, and fill the gaps perceived in the technical capacities of local firms. USAID/Jamaica's project manager will support this continuity and dialogue with government, backed by both companies being continually "on call" and one being physically present. Using firms rather than a full-time technical supervisor also promotes leadership and autonomy that is expected of management in the new St. Ann Water and Sanitation District Authority. Appointing a full-time, expatriate project manager could undermine the Authority's management and create unwanted rivalries.

The project's prompt start-up and its relatively small size, favor selecting the US firm either through a "buy in" to a global program, or a contract with a minority owned company. The mission will determine which direction to take.

The US firm should provide two key advisors (among others) who can provide intermittent and complementary services, rather than sub-divide tasks among a number of persons. The US company would profit by having a single Jamaican firm manage all local consultancies and paying it by product delivered. The local company would ideally have in-house capability in the various program areas: principally organization and human resource development, management information systems, and to a lesser extent, utility engineering and operations.

Annex E lists the levels of effort estimated for each of the prospective positions in the project. Annex F sets out the activity schedule for the project. Annex G outlines the inputs for the project's Logframe.

ANNEX A: ALTERNATIVE SITE DESCRIPTIONS

KINGSTON -- OLD HISTORIC SECTION

This proposed site represents a discrete area of Kingston that receives both water and sewerage service from the NWC. It is characterized by widespread deferred maintenance resulting in significant water losses and sewage overflows that pollute Kingston Harbor and surrounding sensitive marine ecosystems, and threaten public health. Numerous undocumented and unmetered domestic connections exist in the area that waste water and do not pay for the services. Access problems in the area severely limit meter reading and maintenance activities. This results in the following problems:

- * continuing decay of the infrastructure;
- * degradation of water quality in the marine ecosystem;
- * public health risks to residents from raw sewage;
- * financial constraints to maintaining and improving the services and the redevelopment that depends on them;

The citizens support becoming involved in any activity that improves the infrastructure, level of service, and the environment in the Kingston area. Specifically, KRC seeks to take on certain functions in support of a WASD, and has the organization in place to provide financial administration, training, human resources, field work, and public relations. However, they are not currently equipped nor are they interested in taking on all the responsibilities of an independent district that provides retail water and sewerage services.

OCHO RIOS -- NWC-NORTH COAST REGION ST. ANN'S DISTRICT

Separate water and sewerage systems operated by the NWC, UDC and private companies serve an actively growing tourist trade and rapidly growing population in this area. The government is constructing improvements to the sewer system in Ocho Rios and has completed water distribution system improvements. The St. Ann District of the NWC serves Ocho Rios and most of the remaining area within St. Ann Parish. It has a staff of 83 persons, divided between Customer Services, Commercial, Operations, and Accounting. The District has sufficient water supply to meet its needs. However, numerous areas and residents are without adequate water and sewerage service.

District water revenues exceed operating expenditures by approximately US\$ 3 million annually. The operation of the new sewage treatment plant may drain on these resources. These surplus revenues pay for corporate NWC functions and provide a subsidy to other regions of NWC.

The area suffers from a fragmented approach to planning, inadequate maintenance and inconsistent environmental monitoring and compliance. This has led to the following

problems:

- * poor land management with squatters polluting surface water and ground water threatening public health and deforestation reducing surface water supplies;
- * water quality decline in beach areas and Dunns River Falls;
- * unsewered areas and unprotected water supplies;
- * lack of public support and knowledge of the issues;
- * insufficient financing to keep up with population growth.

POSSIBLE WASD CONCEPTS AND FUNCTIONS

KINGSTON

In Kingston, the WASD would focus on providing community and customer services under contract to the NWC in the historic area of the city. This concept takes advantage of the strengths of the KRC and DKMD in community relations and their operative capabilities in finance, training, and field work. This provides a model for transferring enterprise activities to a WASD for which it receives direct reimbursement of expenses and shares incomes gains with the NWC. These include new accounts, meters installed and reduction in unaccounted water. The portfolio of functions include:

- * implementing a customer survey and cadaster;
- * meter reading;
- * billing and collections;
- * community relations and receipt of complaints;
- * meter installations, and potential financing;
- * promotion of sanitary education and water conservation;
- * advocacy and oversight of capital improvements;
- * sewer and storm drain cleaning and maintenance;
- * leak detection.

OCHO RIOS

The WASD in this region could take on broader functional responsibilities than in Kingston. It would convene a board of directors vested with managing water supply and sewerage and overseeing other watershed activities that impact the environment and public health. This model could employ the NWC district office or another operating company to manage the full scope of services including:

- * providing water and sewerage services;
- * maintaining the infrastructure;

- * planning and monitoring for environmental and public health protection;
- * conducting the finances of the district to be self sustaining;
- * providing for public awareness and participation in environmental and utility issues.

CONSULTANT'S UNDERSTANDING OF SITE SELECTION CRITERIA

1. Environmental improvement:

- a. Do water and sanitation systems contribute to environmental problems;
- b. Could a WASD address comprehensively the environmental challenges within its watershed.

2. Ease of establishment:

a. Institutional capability

Institutional capabilities that are in place that would serve as a nucleus for a WASD.

b. Feasible boundaries

Boundaries exist to delineate the functional basis for a WASD that respect its need to finance and operate efficiently the services while providing appropriate environmental management and responsive to social needs.

c. Community receptivity

The community expresses support and willingness to work for the success of the WASD.

d. Advantages to NWC.

e. Potential implementation problems.

3. Financial feasibility and sustainability:

The WASD can generate revenues and develop operative efficiency that will permit it maintain itself in the short and long term.

4. Other criteria:

- a. Public health: Can the WASD improve protection of public health.

b. Potential as a model: Could this approach respond to the problems of a significant part of the island.

SITE SELECTION EVALUATION

CRITERIA	KINGSTON HISTORIC AREA	OCHO RIOS / ST. ANNS AREA
1. Environmental impact		
a. Service related environmental problems	Extends service and increases maintenance to reduce raw sewage impacts on water quality improves public awareness	Better financed and planned maintenance, service extensions, and increased public awareness
b. Comprehensive environmental solutions	No	Monitoring and planning based on a watershed and aquifer.
2. Ease of establishment		
a. Positive institutional context	KRC/DMD operative and capable. Requires training and equipment.	Recent experience with parish control of entire system mgmt. Requires formation of Board.
b. Feasible boundaries	Flexibility in establishing and expanding area.	Flexibility in establishing and expanding area.
c. Community receptivity	Supportive at leadership level.	Supportive at leadership level.
d. Advantageous to NWC	Potential to reduce unaccounted water and increase revenues while improving public image.	Requires appropriate financial engineering. Reduces environmental risks and improves public image.
e. Implementation problems	NWC redundancies; history of community hostility.	Defining NWC corporate role and support; providing authority and means to deal with watershed issues.
3. Financial sustainability.	Fee for contracted services and sharing increased revenues, part of World Bank project.	Current revenues exceed expenditures
4. a Public health	Reduces public contact with raw sewage	Protects water supplies through watershed planning and extensions of service
4. b Potential as model	Enterprise activities could be transferred to other local agencies.	Watershed approach could be broadly applied

ANNEX B: POTENTIAL ROLE OF KRC / DKMD IN WATER AND SANITATION IN KINGSTON

1. SUMMARY

The opportunity exists to create a sustainable commercial enterprise that supports the NWC in metering its water connections, improving service levels, and responding to the community's public health and commercial needs in downtown Kingston.

The proposal involves the NWC contracting with the Downtown Kingston Management District or the Kingston Restoration Company to provide specified retail commercial functions on a fee for service basis. The local provider of these services would also receive a negotiated share of the increased revenues from currently unmetered or non-paying accounts for which they establish normal service.

2. CONTEXT

2.1 Setting for environmental management of water and sanitation

KINGSTON – HISTORIC SECTION

This is a discrete area of Kingston that is undergoing some redevelopment, located on the coastal area alongside the Caribbean's most polluted harbor. The area mixes commercial with poor residential dwellings, many vacant due to riots during the 1970's. The parastatal National Water Commission manages both water and sewer services in the area, as it does over most of the island. The metropolitan area of Kingston is one of its five decentralized regions, operated through a district office and providing about 70% of its operating revenue. No single authority accepts responsibility for the storm drainage system, that interconnects to the sewer system and causes frequent flooding.

Most public service infrastructure in the downtown area is old and decayed. A USAID funded project is building the Harbour Street sewer main that forms part of a plan to resolve contamination of Kingston Harbour. Contractor related problems have delayed substantially its construction, and it remains unconnected to the sewer system. The World Bank is in the process of preparing a loan to finance high priority rehabilitation activities of the water and sewer systems in Kingston. It views this as a step prior to some form of privatization of the NWC or of its Kingston area operations.

The Kingston Restoration Company is an established non-governmental organization active in the historic area and recognized for undertaking successful enterprises and having good community rapport. Among other activities, building rehabilitation and training programs. It helped establish a management committee made up of tenants and property owners to mobilize support for the improvement of public services in their area -- the Downtown Kingston Management District. This organization intends to levy special assessments on

tenants and property owners to support its activities and supplement tax revenues for specific services or projects. It manages solid waste collection under government contract. USAID/Jamaica actively supports both organizations and has used the KRC as a project grantee.

2.2 Government policy

The Government of Jamaica is attempting to find better ways to organize and manage the water and sanitation sector. It placed sewerage within the NWC's organizational competence in 1994. Parliament recently passed legislation establishing a regulatory authority to oversee utilities, though the Ministry of Finance considers this entity will not affect the water and sanitation sector in the near term. Policy decisions remain to be formulated about possible privatizations in the sector, following a USAID funded study on this topic.

The GOJ continues to be unclear about the extent to which user fees should recover capital investment costs. This creates an obstacle for the potential of local special service districts to raise contributions toward investments in public infrastructure. That potential is very real. The Government of Jamaica has recently authorized J\$ 100 million tax free bonds for downtown investment projects. The NWC desperately needs investments in metering, an activity with potentially quick payback.

The GOJ is searching for models that insert local control of water and sanitation services as a way to improve their management. Some private sector response would be welcomed rather than direct local government involvement.

2.3 Institutions and parties involved

The KRC and DKMD seek to take on certain functions in support of water and sanitation, and have the organization in place to provide financial administration, training, human resources, field work, and public relations. However, the organizations are not currently equipped nor are they interested in taking on all the responsibilities of an independent district that provides retail water and sewage services.

All parties related to the project have expressed their support. The KRC and DKMD represent business interests and residents, including poor families in "garrison" districts accustomed to paying nothing for public services but who look to the KRC to improve them. The NWC is receptive to help for its collections problems in these areas within the downtown area and in other places around the island. The Commission also seeks assistance on sewer maintenance and for metering. The electric utility JPS has similar difficulty with collections.

2.4 Problems to be resolved

- * Blocked sewers obstruct flows to the existing and proposed treatment plants, dumping raw sewage onto streets and into Kingston Harbour.
- * Poorly informed and sometimes hostile residents dump garbage in sewer manholes and storm water drains.
- * As most residential connections do not pay water bills, NWC has no incentive to maintain the water and sewer systems nor to remedy decaying infrastructure.
- * Most water delivered to the area is lost; little is metered.
- * Public health risks from raw sewage are high for residents.
- * Poor sewerage adds to factors that slow redevelopment of the area.

3. PROJECT INTERVENTIONS

3.1 Goal -- general objectives

Modified public behavior and financial support for a cleaner, healthier downtown area that helps sustain large capital investments needed to reduce contamination of Kingston Harbour.

3.2 Purpose -- specific objectives

The project would focus on providing community and customer services under contract to the NWC in the historic area of the city. This concept takes advantage of the strengths of the KRC and DKMD in community relations and their operative capabilities in finance, training, and field work. It provides a model for transferring enterprise activities to a local NGO or a Water and Sanitation District that receives direct reimbursement of expenses and shares income gains with the NWC. These include new accounts, meters installed and reduction in unaccounted water. The portfolio of functions include:

- * implementing a customer survey and cadaster;
- * meter reading;
- * billing and collections, disconnects and reconnects;
- * community relations and receipt of complaints;
- * meter installations, and potential financing;
- * promotion of sanitary education and water conservation;
- * advocacy and oversight of capital improvements;
- * sewer and storm drain cleaning and maintenance;
- * leak detection.

3.3 Output results

A functioning pro-active, community based organization that provides customer interface for the NWC and undertakes priority routine maintenance.

1. Contract in place between NWC and the local provider for commercial services.
2. Local provider has trained staff to perform retail functions.
3. Number of metered and/or paying accounts has increased.
4. Local provider is performing public outreach activities.
5. Local provider is performing sewer and storm drain maintenance activities in response to public health and environmental concerns.

3.4 Input activities

This project is based on starting slowly with 2 meter readers, 2 meter installers, a community relations person, and administrative assistance. It requires startup assistance in the following areas:

Task 1.0 Technical Assistance

A business plan and assistance with negotiating a contract are required to initiate this enterprise activity. This would be performed primarily with existing staff at a cost of US\$ 10,000.

Task 2.0 Start-up Support

During the first 3 months of the project the local executing organization will require some start-up assistance in subsidizing the administrative staff. This is anticipated to be a partial subsidy for approximately 2 months at a cost of US\$ 3,000 to hire a part time administrator and develop the necessary procedures.

Task 3.0 Training Field Workers

The training of meter readers lasts approximately 3 months, assuming a crew of 2 people this would cost approximately US\$ 3,000. The training of meter crews for installation, disconnection and reconnection is assumed to take 2 weeks, as these workers already possess basic plumbing skills. This would cost approximately US\$ 4,000 for a crew of 2 people.

Task 4.0 Equipment

Making this a successful enterprise will require a minimal amount of equipment for office support and tools and safety equipment for field workers. While no detailed estimates were developed, a budget of US\$ 15,000 seems adequate.

Task 5.0 Community Relations

The key to the success of this project is an active community relations effort. A full time person with the ability to solicit and pay for support in the community would cost approximately US\$ 10,000 to become operational, after which this function becomes an ongoing expense of the operation.

5. FACTORS THAT GUARANTEE FEASIBILITY AND SUSTAINABILITY

5.1 Supportive policies

The GOJ's orientation toward decentralization and privatization of public service delivery supports the project.

5.2 Socio-cultural aspects

A wide cross-section of downtown residents and firms have shown support for the KRC and DKMD. The DKMD undertakes ongoing related work in solid waste disposal under government contract.

5.3 Executing capacities

As the project grantee, the KRC has received and correctly managed USAID grants, amply demonstrated its capability in community relations and its operative capabilities in finance, training, and field work.

The DKMD can legally operate and eventually fund such ventures, requiring financial support until the activity becomes self-sustaining.

ANNEX C:CONTACT LIST

The consultant team made the following contacts during the course of the assignment. Only key contacts are listed as many other people participated in presentations to groups of citizens. Telephone numbers are provided where available.

Ministry of Public Utilities and Transportation

Dr. Arthur Geddes, Permanent Secretary

Mr. Coy, Root, Chief Engineer;

Tel. 926-9170

Member of Parliament for St. Ann Parish (Acting Prime Minister and Minister of Foreign Affairs)

Mr. Seymour Mullings

Member of Parliament, Northeast St. Ann Parish

Mr. Manley Bowen

Tel. 972-1548; home 974-2078

National Water Commission

Mr. Brian Young, Executive Chairman

Tel. 929-5430

Mr. Lloyd Grey, Vice President, Technical Services

Tel. 929-3540

Mr. E.G. Hunter, Vice President Corporate Planning & MIS

Mr. Maurice Charvis, Corporate Planning

Tel. 929-3537

Mr. Vernon Barrett, Investment Planning

Ms. Lorna Franklin, District Manager, Kingston

Tel. 922-0252

Mr. Lloyd Douglas, North District Regional Manager

Tel. 994-2853

Mr. Noel Hyde, District Manager, St. Ann Parish

Ms. Carol Carr, Customer Services

Mr. O.C. Brown, Customer Services

Tel. 972-1233

Counsel to Parliament

Ms. Erica Monroe, Assistant Counsel

Tel. 967-3409

St. Ann Parish Council
Ms. Cynthia Graham, Secretary
Tel. 972-2615

St. Ann Environmental Protection Assoc.
Ms. Wendy Van Barneveld

St. Ann Chamber of Commerce
Ms. Jeanne Dixon, President
974-2629, FAX 974-2359

Also met with 18 other members of Chamber, including:
Ms. Audrey Barned, Tel. 974-5188
Desmond Palmer, Tel. 974-2858
Mr. William Whiting, Tel. 974-9393

UDC
Mr. Danny Melville, Chairman (contacted by phone)
Tel. 974-2593, in Kingston 923-4429
Mr. Alfred Allen, Manager

Ocho Rios Citizen's Association
Reverend M.S. Edwards, President
Tel. 924-0885

Mr. J.S. Brown, Acting President
Also met with 18 additional persons in the association, who represent various other organizations.

National Computer Services, Ltd.
Mr. Franklin Johnston, Chairman & Management Consultant
Tel. 928-4311, home 977-0383

Attorney
Mr. Ronny Thwaites
Tel. 922-9683, home 977-8000

London Economics; World Bank Consultant to Ministry of Finance
Mr. David Ehrhardt, Senior Consultant
Tel. 44-0171-436-2911 (London, U.K.)

Ministry of Local Government
Mr. Keith Miller, Consultant
Tel. 922-1670

Montgomery Watson (environmental engineering firm)

Mr. Clive Harrison, Senior Associate
Tel. 44-1494-536636 (Buck, U.K.)

Kingston Restoration Corporation
Mr. Morin Seymour, Executive Director
Tel. 922-7748

We also met with the full Board of Directors of the KRC

Downtown Kingston Management District
Mr. Michael Amar, Jr., Chairman
Tel. 922-4852
Mr. John Lee, Treasurer
Tel. 922-6230

ANNEX D: TWINNING PROGRAM

A long-term institutional partnership is proposed between the WASD and a counterpart utility in the U.S. This partnership would supplement ongoing technical assistance and institutional capacity to the WASD.

The proposed twinning partner is the Department of Public Utilities of Hillsborough County, Florida. In 1994, Hillsborough County received the U.S. Environmental Protection Agency Award for Outstanding Operations and Maintenance Excellence and has been recognized in a number of other service areas. The director of the wastewater division, Scott Emery, Ph.D. has expressed interest in supporting the program and has had limited prior international experience.

In addition to the normal functions of a water and wastewater management system, Hillsborough County has implemented a range of innovative programs. These programs may prove to be useful models for water conservation, reuse and citizen participation initiatives by the Authority.

Water Conservation

Hillsborough County has an Aggressive Water Conservation Program that has significantly reduced per capita water use. Through a combination of a tiered rate structure for billing purposes, citizen education and installation of low-flow devices, the County reduced residential water use by about 10% in one year.

Water Reuse

The Public Utilities Department currently operates eight permanent and two interim wastewater treatment plants. In 1994, the eight facilities produced over 23.5 MGD reclaimed water. Approximately 25% of this amount was used for landscape irrigation, agricultural irrigation, industrial uses and other so-called "beneficial purposes." In the County's South Central region, four treatment plants produce 8.6 MGD reclaimed water, with 48% of that used for irrigation of 9 golf courses, commercial irrigation systems and process water for two industrial reuse systems. Additionally, recycled water is recycled internally in the County's wastewater treatment plants, replacing potable water usage in various plant processes. The County also has several small reuse projects such as providing reclaimed water to be trucked for landscape irrigation.

The County has established a procedure for constructing and financing reclaimed water distribution systems in existing subdivisions through the Reclaimed Water Improvement Units (RWIU) ordinance. Currently, in the Northwest service area of the County, over 1,000 residents have connected to the reclaimed water systems. After construction of distribution

and transmission lines is completed, another 1,500 resident will connect to the service.

Development Impact

The County developed a Seven Point Program to assess the impact of commercial and industrial development, including related water supply development, on the environment. Development of the Seven Point Program involved active community participation and now serves as a model for the region.

Citizen Participation

In recent years, the County has made special efforts to involve the community in water and natural resource management. The Hillsborough River Greenways Task Force (HRGTF) is a coalition of public, private, regulatory, environmental and corporate organizations. The HRGTF has responsibility for developing and implementing a regional plan for protecting the river basin and has authority to monitor, implement and manage those programs designated to the Task Force by the County. The State of Florida has initiated legislation to make the Task Force an Official State Test Case to develop and implement an Ecosystem Management program.

**ANNEX E: PROPOSED ST. ANN PARISH WATER AND WASTEWATER
DISTRICT
ESTIMATED LEVEL OF EFFORT**

POSITION	PERSON-MONTHS
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US TECHNICAL ASSISTANCE

Utility Management and Engineering Advisor	3.75
Utility Finance and Organization Advisor	4.0
Environmental Monitoring Advisor	0.75
US Contractor Technical Manager	2.0

LOCAL TECHNICAL ASSISTANCE

Management and Information Advisor	4.5
Financial Management Specialist	4.5
Information Systems Design Specialist	0.75
Information Systems Analyst(s)	8.0
Organization and Methods Specialist	3.0
Personnel Specialist	0.5
Engineer -- Operations and Maintenance	3.0
Engineer -- Capital Works Planning	3.0
Watershed Monitoring Specialist	2.0
Community/Social Promotion Specialist	4.0
Local contractor technical manager	3.0

OTHER LOCAL SERVICES

Utility Chief Executive Officer (recruited early)	3.0
Legal Advisory Services	
Executive Search Services (approx. 3 positions)	

COMMODITIES

Computer Hardware for Water/Sanitation Authority	\$45,000.
Computer Software for Water/Sanitation Authority	\$40,000.
Office Furniture and Equipment	\$ 8,000.

Budget
**ANNEX E: PROPOSED ST. ANN PARISH WATER AND WASTEWATER DISTRICT
 ESTIMATED LEVEL OF EFFORT**

DIRECT LABOR POSITION	Total Mo	PERSON-MONTHS										
		Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Task 9	Task 10	Task 11
--US												
Utility Management & Engineering A	3.75		1	1	0.25				0.75	0.75		
Utility Finance & Organization Advis	4		1	1.5	0.25	0.25		0.75				0.25
Environmental Monitoring Advisor	0.75										0.75	
US Contractor Technical Managemen	2	2										
<u>SUBTOTAL</u>	<u>10.5</u>											
--Local												
Management and Information Special	4.5	0.5	0.75	1.5	0.25	0.25	0.25	1				
Financial Management Specialist	4.5		0.75	0.25	0.25	0.25		3				
Information Systems Design Specialis	0.75		0.25			0.5						
Information Systems Analyst(s)	8							8				
Organization and Methods Specialist	3				3							
Personnel Specialist	0.5				0.5							
Engineer - Operations and Maintenanc	3		0.75	0.25					2			
Engineer - Capital Works Planning	3		0.75	0.25						2		
Watershed Monitoring Specialist	2		0.75								1.25	
Community/Social Marketing Special	4		0.75	0.25								3
Local contractor technical manageme	3	3										
<u>SUBTOTAL</u>	<u>36.25</u>											
Utility CEO (recruited)	3			0.5	0.5				0.5	0.5	0.5	0.5
Twining (task 12)												
US employee visits	2.5		0.5	0.5	0.5			0.5			0.5	
St. Ann Authority visits	2.5			0.5	0.5		0.5	0.5			0.5	
TOTALS	54.75	5.5	7.25	6.5	6	1.25	0.75	13.75	3.25	3.25	3.5	3.75
US	13											
Local	41.75											

ANNEX G – LOGFRAME

Goal:

The goal of the project is to improve environmental quality and natural resource protection. (USAID/Jamaica strategic Objective No.2)

Purpose:

To establish and test a model of local management of water and sewerage in St. Ann Parish, controlled by the community, that protects water quality and public health on a sustainable basis.

Indicators of achieving project purpose

- The St. Ann Water and Sanitation District Authority is operating on a profitable and environmentally sound basis.
- The GOJ and communities elsewhere are considering the establishment of Water and Sanitation District Authorities.

Output:

The St. Ann Water and Sanitation District Authority is formed.

Output Indicators End-of-Project Status (EOPS):

1. License agreement with NWC is approved and in place.
2. The District Authority is incorporated under the laws of Jamaica and the Board of Directors is in place.
3. The General Manager and key staff are hired.
4. A refined organizational structure is in place with unit functions defined including a community promotion officer.
5. Financial systems are in place and personnel are trained and are operating the systems.
6. The District Authority is managing the water and sewerage systems.
7. The District Authority reconciles its account information on collections with NWC each month.

8. The District Authority has a watershed monitoring plan in place and is routinely sampling points of pollution, surface and ground water sources and water quality in beach and other sensitive areas.
9. A public promotion plan is in place, public participation events are being conducted and the public participates in capital works planning and implementation.

Project Inputs:

1) Technical assistance:

13 person months	US, including about 2.5 months that a US utility donates in a twinning arrangement. USAID project finances only travel and living expenses during twinning interchanges.
39.25 person months	Local
3 person months	Chief Executive Officer, before startup of District Authority

2) Limited commodities purchases:

\$45,000	Computer Hardware
\$40,000	Computer Software
\$ 8,000	Office Furniture and Equipment

3) Counterpart contributions:

Office and administrative support for technical advisor (NWC District Office & St. Ann Chamber of Commerce).

NWC contribution to needs assessment, information and financial systems development, organizational restructuring, asset inventory and capital planning.

Participation in twinning -- about 2.5 person-months from the US utility and an equal amount from the community and NWC.

Assumptions for achieving outputs:

1. GOJ and NWC agree in a timely way to the terms of the license that delegates management to the St. Ann Water and Sanitation District Authority.
2. Broad-based support sustains the interest and participation of community leaders.