

CARE - HAITI

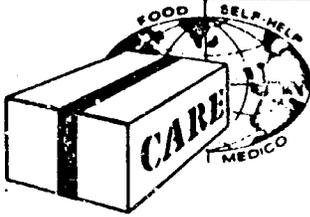
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Cable: CAREPORT

PROGRAMMES DE DEVELOPPEMENT
ET DE NUTRITION EN HAITI DEPUIS 1959



PD - NBA - 016

January 26, 1983

TO: James Gardner, Chief Eng.
USAID-Haiti

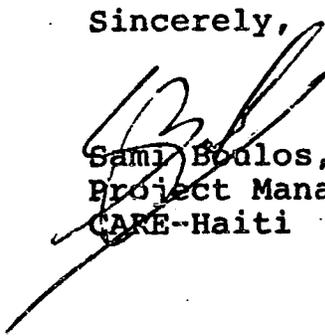
FROM: Sami Boulos
CARE-Haiti

SUBJECT: Final Proposal

Dear James,

As per your request, you will find attached, copy of a draft of the final Project Proposal for the Water Project, in Grande Riviere du Nord and Ste. Philomène.

Sincerely,


Sami Boulos, Eng.
Project Manager
CARE-Haiti

SB/fr

cc: Ann Fitzcharles

encl.

PROJECT PROPOSAL

Country: HAITI (046)

Project Title: ESF Community Water Systems

Period : April 1983 - September 1984

Prepared by : Sami Boulos, Eng.

I. Introduction

A. Project Description

With completion of phase III of the water project on the North Coast and in Northern Artibonite scheduled for September 1983, CARE/Haiti is proposing to shift the focus of its water projects both geographically and demographically. The proposed project intends to construct only 2 community water systems but the sites will be located in the North and the Northeast and will supply water for communities with 6,000-12,000 inhabitants.

II. Project Design

A. Statement of the Problem

The health statistics cited in the previous MYP proposal from Ministry of Public Health sources remain valid in 1983: "that approximately 3.5% of all deaths in Haiti are caused directly by waterborne intestinal disease; that this percentage is composed largely (86%) of children up to five years of age; that 15% of all hospital admissions are the result of intestinal diseases". This problem is linked closely to the fact that only 15 per cent of the population have access to minimally safe drinking water and that this problem is especially acute in rural areas.

This is not to say that water resources do not exist to satisfy the drinking water needs of the population. In fact, the North and Northeast contain numerous artesian springs which yield a considerable volume of water. However, these sources are often found at great distances from population centers and are entirely unprotected from contamination. The poor Haitian townspeople are usually obliged to spend several hours collecting their water or alternatively to collect surface water or stream water which is even more subject to contamination.

B. Final Goal

The final goal of this project is:

- to improve the quality of life of approximately 18,000 inhabitants of 2 rural towns in Northeast of Haiti.

C. Intermediate Goals

The intermediate goals of this project are:

1. an adequate and dependable supply of water accessible to 18,000 residents of 2 rural towns in Northeast Haiti by September 1984;
2. effective maintenance performed by communities at 2 water project sites by September 1984.

D. Project Activity Targets

1. CARE FY '83 (April 1, 1983 - June 30, 1983)
 - form water committees in Grande Riviere du Nord and Ste Philomene;
 - establish community construction and maintenance fund accounts;
 - complete topographical survey and construction plans;
 - place orders for construction materials and vehicles.
2. CARE FY '84 (July 1, 1983 - June 30, 1984)
 - construct community water system at Grande Riviere du Nord.
 (16) fountains;
 - start construction at Ste Philomene.
3. CARE FY '85 (July 1, 1984 - September 30, 1984)
 - complete construction at Ste Philomene. (12) fountains;
 - conduct end of project evaluation.

III. Project Overview

A. Project Development

The proposed project is a logical extension of previous and ongoing activities in the field of water resource development that CARE has undertaken in the North and Northwest. Those projects have aimed at providing improved water systems to the people who inhabit the poor towns and villages of Haiti by capping existing springs and piping the water to distribution points in or near the population center. By September 1983, 50 water sources will have been constructed supplying drinking water to an estimated 70,000 people.

The CARE team implementing the current project has travelled extensively in the region. Their observations indicate that a great need still exists in the adjacent areas of the North. In visits to several communities near Cap-Haitien, CARE personnel encountered large conglomerations of people who had to rely on surface water and intermittent streams for drinking and domestic

use even though a number of springs located within a few kilometers of the towns could supply good quality water. Moreover, interviews with community councils revealed a high level of local interest in undertaking a water project.

B. Project Strategy

Development of water resources continues to be a top priority for both the Department of Health and the Department of Agriculture, as well as the agencies that provide the foreign assistance that finances most of the initiatives in this sphere. The government has created a National Water Service which is charged with coordination of efforts in the potable water field. Although legally responsible for maintaining functioning systems throughout Haiti, it is assumed that SNEP will require some time to develop the institutional capacity to fulfill this role adequately.

CARE, of course, has gained considerable experience in the water field since starting the first project in the Northwest in 1976. In addition, CARE continues to support several water projects elsewhere in Haiti through its food-for-work program.

C. Project Impact

Among the impacts that can be anticipated from this project are:

1. time saving especially for the women who primarily bear the burden of collecting water and will benefit from the convenience of neighborhood fountains;
2. encouragement of community action and the community council movement in the targeted localities. By successfully completing a major undertaking in partnership with CARE, an impetus to further self-help efforts can be expected. In the psychology of development, achievement of community oriented projects can often result in a change of outlook from passivity to a new spirit of hope for the future that inspires an active search for improvements in the quality of life;
3. healthier living conditions particularly for young children who are the most susceptible to waterborne illnesses; it is beyond the scope of the project to demonstrate health improvements, however.

D. Project Continuity

The community water systems constructed under the project will be gravity flow systems that will require little maintenance. Eventual repair costs must be borne almost entirely by the community, though SNEP should be able to provide the necessary technical assistance. Considerable effort will be devoted to preparing the communities for this critical function. CARE will provide on-site training to two local residents selected by the water committee. In addition, before site completion, the committee will be obliged to establish a bank account for maintenance by assessing each user family \$0.50. A community development organizer will assist each committee in creating a decision making apparatus to resolve such issues as water charges, revenue use and maintenance of the system. [CARE technical assistance will cease upon completion of each system although project personnel will continue to advise the water committee until they achieve an efficient standard of operations.] Space parts

E. Project Potential

Although the project is certainly replicable, it cannot be supposed that wider scale application can be accomplished within the present resources of the GOH or interested communities. While SNEP, for example, has conducted technical studies on the proposed community water systems, none have been planned for execution.

F. Project Constraints

The logistical constraints which seriously impeded implementation of the Phase I project have been resolved in the course of Phases II and III. Since the proposed project will be concentrated in a more accessible zone and because no more than two construction sites will be active simultaneously, the logistics will be much simplified.

If it is found subsequently that one of the communities listed in the proposal cannot or will not meet the conditions specified by CARE, an alternative site where construction can be accomplished within the project budget will be selected in consultation with SNEP.

Two potential problems can be envisioned that might impede achievement of the Intermediate Goals:

1. While the National Potable Water Service is theoretically responsible for maintenance of existing drinking water sources, there is no conclusive evidence available that its infrastructure is capable of fulfilling this mandate. Nevertheless, CARE will collaborate as closely as possible with SNEP with a view to strengthening their institutional capacity to serve rural communities.
2. The task of organizing viable water committees may not be simple, given the complex relationships that often govern social behavior in rural Haiti. However, with the help of a community development organizer and other extension agents it is assumed that beneficiaries can be persuaded that a management apparatus is entirely in their self-interests.

IV. Project Implementation

- A. The primary condition upon which implementation will depend is the ability to secure adequate funding in a timely fashion.

Community support for the community systems has already been voiced in each of the towns but it will be necessary to work out the details of the self-help effort with the participating councils. Having learned from experience with Phases II and III projects that cash contributions are the best measure of community commitment to any endeavor, CARE will require that each community collect \$.50 per family which CARE will use to purchase material or that the community itself purchase an equivalent amount of material requested by CARE. Also, CARE will require that communities voluntarily collect locally available materials such as rock, sand and gravel for construction and the needed land for the reservoirs and fountains before construction will begin. The value of this contribution is estimated at \$9,000.00 for the two sites.

As the project is labor-intensive and will require several thousand man/days of local labor mainly for digging trenches for pipe, CARE plans to use food-for-work contracts with the water committee to compensate the workers employed to perform these tasks. Estimating an average of 18,000 man/days per site, 1,085 sacks of bulgur and 540 gallons of oil will be provided to project workers in each locality. Total PL 480 inputs would then be 109,000 lbs. of bulgur and 8,320 lbs. of oil.

Design plans for the individual systems will be submitted for approval to SNEP and the Engineering Division of USAID/Haiti prior to the start of construction at each site.

Three months of lead time will be required to place orders for construction materials before activities can commence at the first site. At the time, establishing water committee in the two sites ought to be finalized.

B. Implementation Plan and Schedule

	<u>Start</u>	<u>End</u>
1. Spring and topographical survey for Grande Riviere du Nord & Ste. Philomene	3/83	4/83
2. Structural plan designed & approved by SNEP and AID for both sites	4/83	5/83
3. Place US orders for vehicles and materials	3/83	5/83
4. Water committee elected and organized for both sites	3/83	6/83
5. Construction of Grande Riviere du Nord water system	7/83	6/84
6. Construction of Ste. Philomene water system	10/83	9/84

C. Technical Considerations

This project represents a substantial jump in technical sophistication over previous CARE water activities insofar as the water systems will serve much large populations and involve more numerous distribution points. However, having a qualified engineer on the CARE/Haiti International staff and competent supervisory personnel with considerable field experience will enable CARE to manage the technical aspects of the project. As noted previously, CARE will collaborate on technical matters with both SNEP and the Engineering Division of USAID/Haiti.

Because the two systems will rely on gravity flow feeds maintenance problems ought to be minimal and within the capability of the communities with the assistance from the National Potable Water Service (SNEP).

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D. Procurement Requirements

CARE plans to procure the following vehicles from the US to fulfill the project's transport requirements:

1. CJ-7 jeep for Haitian engineer who will be inspecting sites daily;
2. a Ford F-600 dump truck, to transport the large quantities of construction materials to the sites. Until these vehicles are available, the project will utilize the other truck, J-20, CJ-7 and the Cherokee from the on-going water project.

Construction materials such as pipes, valves, and fittings for the project will be purchased from the US. The rest of the materials such as cement and steel bars and lumber will be purchased locally.

E. Personnel Requirement

Much of the personnel required to execute the project are already working on the Phase III Water Project. These include:

1. International Engineer/Project Manager
2. National Engineer (2)
3. Foremen - Animators (2)
4. Chauffeurs (3)
5. Community Development Organizer (1)
6. Boss Mason (1)
7. Plumber (2)
8. Secretary (1)

Administrative and logistical backstopping will be provide by CARE/Haiti's central office in Port-au-Prince and its sub-offices in Gonaives and Cap.

V. Project Evaluation

A. Final Goals

? { To measure an achievement of the quality of life improvement among targeted beneficiaries the following indicator will be used: number of daily users as per physical count during one 12 hour period (6 AM - 6 PM) at each distribution point.

I WOULD SUGGEST AN 18 HOR PERIOD
SAY FROM 0500 TO 2300 HRS.

B. Intermediate Goals

1. Indicators of an adequate and dependable supply of water accessible to targeted beneficiaries are:
 - a. number of systems providing minimum of 8 gallons (30 liters) per capita per day;
 - b. hours per day water available;
 - c. average distance in time from beneficiary home to distribution point.

2. Indicators of the performance of effective maintenance are:
 - a. average number of days down time annually per fountain;
 - b. amount of \$ in bank account for each of the community maintenance funds;
 - c. number of people trained for maintenance residing in communities.

These indicators will be monitored by project personnel every four months on the Plan, Implementation and Evaluation Report and will also form the basis for the final evaluation.

III

$\frac{\$487,600}{18,000 \text{ users}} = \$27/\text{CAPITA}$

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COST SUMMARY

	<u>TOTAL</u>
1. <u>Personnel</u>	140,000
a. International	
- Project Manager Engineer	
b. Local Personnel	
- Two Engineers	
- One Community Development Organizer	
- Two Foremen Animators	
- Three Drivers	
- One Boss Mason	
- One Plumber	
- One Plumber Assistant	
- One Secretary	
2. <u>Training Costs</u>	3,000
3. <u>Commodity costs</u>	
a. Locally purchased	
- 75 MT cement & masonry on site	8,500
- 10 MT steel rod & preparation on site	7,000
- 8 M ³ lumber & carpentry on site	3,000
- Miscellaneous (tools, fittings, valves, buckets, wheelbarrows, etc.)	5,000
b. U.S. Purchases	
- 35,000m conduit	175,000
- CJ-7 diesel	13,000
- F-800 dump truck & two motorcycles	30,000
4. <u>Other Costs</u>	
a. Fuel	25,000
b. Maintenance	10,000
c. Other Support cost	22,000
d. Community in-kind (sand, gravel and land)	9,000
e. 7.42 NY overhead	37,160
Total:	<u>487,660</u>

The World Bank has estimated that rural community water supply systems in Latin America and the Caribbean averaged \$24.00 per capita in 1970. Our figures indicate that upon the completion of Phase III in FY '83 the cost per capita will be approximately \$13.00. (Phase I+II+III)

FFW will be used for non skilled labor which will amount to \$20,000.

Grande Riviere du Nord
Materials & Labor Cost Estimate

1. Conduit

a. 6" PVC 160psi - 1900 bars (6m) x \$60.00	\$ 114,000
b. 3" PVC "" - 700 bars (6m) x 18.00	12,600
c. 2" PVC "" - 700 bars (6m) x 9.00	6,300
d. 1" PVC "" - 200 bars (6m) x 5.00	1,000
e. 2" Gal. (B) - 100 bars (6m) x 28.00	2,800
f. 1" " (B) - 200 bars (6m) x 15.00	3,000
g. ½" " (B) - 100 bars (6m) x 10.00	1,000
	140,700

2. Cement

a. 50,000 gal. capacity reservoir - 400 bags x \$5.00	2,000
b. 16 fountains x 15 bags - 240 bags x \$5.00	1,200
c. Spring cap, pipe supports & pressure relief chambers, etc. - 170 bags x \$5.00	850
d. masonry on-site	400
	4,450

3. Steel Rod

a. 7 MT x \$550.00	3,850
b. Steel preparation on site	150
	4,000

4. Lumber

a. 6 m ³ x \$300	1,800
b. Carpentry work on site	300
	2,100

5. Miscellaneous (tools, fittings, wheelbarrows)

3,000

Sub Total M&L

\$154,250

Ste. Philomene

Materials & Labor Cost Estimate

1. <u>Conduit</u>		
a.	4" PVC 160Psi - 500 bars (6m) x \$30.00	\$ 18,000
b.	3" PVC "" - 300 " " x 18.00	5,400
c.	2" PVC "" - 400 " " x 9.00	3,600
d.	1" PVC "" - 150 " " x 5.00	750
e.	2" Gal. (B) - 75 " " x 28.00	2,100
f.	1" " (B) - 150 " " x 15.00	2,250
g.	½" " (B) - 75 " " x 10.00	750
		<u>32,850</u>
2. <u>Cement</u>		
a.	30,000 gal. capacity reservoir - 250 bags x \$5.00	1,250
b.	12 fountains x 15 bags - 180 bags x \$5.00	900
c.	Spring cap, pipe supports, etc. 120 bags x \$5.00.	600
d.	Masonry on site	300
		<u>3,050</u>
3. <u>Steel Rod</u>		
a.	3 MT x \$550	1,650
b.	Steel preparation on site	100
		<u>1,750</u>
4. <u>Lumber</u>		
a.	2 m ³ x \$300	600
b.	Carpentry work on site	150
		<u>750</u>
5. <u>Miscellaneous (tools, fittings, etc.)</u>		2,000
		<u>2,000</u>
	Sub Total M&L	<u>\$ 40,400</u>

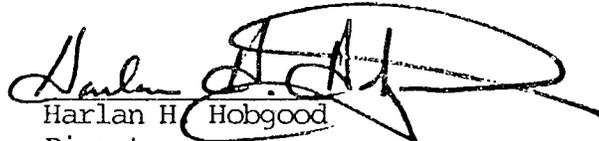
TOTAL MATERIALS & LABOR COST ESTIMATE

Grande Riviere du Nord	\$ 154,250
Ste. Philomene	40,400
Other Miscellaneous	3,850
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Total M&L	\$ 198,500

PROJECT AUTHORIZATION

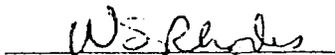
Name of Cooperating Organization : Cooperative for American Relief
Everywhere (CARE)
Name of Project : Community Water Systems
Number of Project : 521-0169 (8)

1. Pursuant to Section 531 of the Foreign Assistance Act, as amended, and Chapter VI of the Supplemental Appropriations Act of 1982 (P.L. 97-257), I hereby authorize the obligation of \$475,000 for the Cooperative for American Relief Everywhere (CARE) through a Cooperative Agreement, to assist in the financing of two year life-of-project foreign exchange and local currency costs of the Community Water Systems Project.
2. The Project will involve construction and maintenance of water systems in two rural communities in northern Haiti. Community participation is a key aspect and crucial to the success of the Project.
3. The Project Agreement, which may be negotiated and executed by the officer to whom such authority is delegated in accordance with A.I.D. Regulations and Delegations of Authority, shall be subject to such terms and conditions as A.I.D. may deem appropriate.
4. The procurement of two motorcycles, with an aggregate cost of approximately \$3,000, from countries included in AID Geographic Code 935 is hereby authorized.

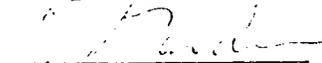

Harlan H. Hobgood
Director
USAID/Haiti

3/29/83
Date

Clearances:


W. S. Rhodes, DRE


F. Ryder, CONT


J. Gardner, ENG


F. Hayden, A/CSO


D. K. Shannon, A/D/DIF