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DEPARTMENT OF STATE

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Attached is the "Evaluation Summary" part I and II for
"AID/PAV/PAV and Marine Construction" - Project

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PAGE 1 OF 1

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PROJECT EVALUATION SUMMARY (PEB) - PART 1

Report Symbol U-417

1. PROJECT TITLE Rural Potable Water and Latrine Construction			2. PROJECT NUMBER 520-0231	3. MISSION/AID/W OFFICE USAID/Guatemala
			4. EVALUATION NUMBER (Enter the number maintained by the reporting unit, e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) <u>79-4</u>	
			<input checked="" type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION	
5. KEY PROJECT IMPLEMENTATION DATES			6. ESTIMATED PROJECT FUNDING	7. PERIOD COVERED BY EVALUATION
A. First PRO-AG or Equivalent FY <u>75</u>	B. Final Obligation Expended FY <u>77</u>	C. Final Insur. Date FY <u>78</u>	A. Total. \$ <u>582,000</u> B. U.S. \$ <u>267,000</u>	From (month/yr) <u>08-77</u> To (month/yr) <u>07-78</u> Date of Evaluation Review <u>07-25-78</u>

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues and those items needing further study.
(NOTE: Mission decisions which indicate AID/W or regional office action should specify type of document, e.g., Memo, SPAR, PIO, which will present detailed request.)

B. NAME OF OFFICER RESPONSIBLE FOR ACTION

C. DATE ACTION TO BE COMPLETED

N/A

N/A

N/A

9. INVENTORY OF DOCUMENTS TO BE REVIEWED PER ABOVE DECISIONS

<input type="checkbox"/> Project Paper	<input type="checkbox"/> Implementation Plan e.g., CPI Network	<input type="checkbox"/> Other (Specify)
<input type="checkbox"/> Financial Plan	<input type="checkbox"/> PIO/T	_____
<input type="checkbox"/> Logical Framework	<input type="checkbox"/> PIO/L	<input type="checkbox"/> Other (Specify)
<input type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/W	_____

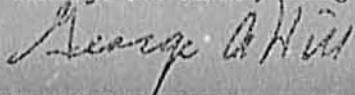
10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

N/A

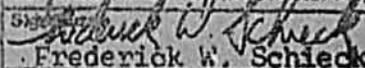
A. <input type="checkbox"/>	Continue Project Without Change
B. <input type="checkbox"/>	Change Project Design and/or
	Change Implementation Plan
C. <input type="checkbox"/>	Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS (as appropriate) (Names and Titles)

George A. Hill, Program Officer



12. Mission/AID/W Office Director Approval


Frederick W. Schieck

Typed Name

Date

December 12, 1978

SUMMARY

This is the final evaluation of an OPG to CARE. Sixteen water systems with accompanying latrines have been completed to date which serve 10,000 people. Nineteen systems will have been completed by September 1978, serving 17,000 people and by January of 1979, 21 systems serving 19,000 people will have been completed. The original goal of the Project was 30-50 systems with 20,000 to 25,000 beneficiaries. This goal has not been met due to external factors discussed below.

A methodology has been developed which requires a (large measure of community involvement and commitment including participation in the planning, construction, management and maintenance of the potable water system and latrines provided by the Project). This has led the communities to undertake other self-help projects using other sources of revenue.)

(Latrinization has been linked to the provision of potable water systems which has led to a greater acceptance and eventual usage than if the latrines were provided separately.)

USAID funding will end in August 1978 and CARE support will be withdrawn in September 1978. All village projects presently under construction will be completed by January 1979.

EVALUATION METHODOLOGY

This was a regular evaluation, in accordance with the last evaluation plan submitted. Evaluation methodology consisted of an examination of USAID's files, analysis of Grantee's periodic reports, interviews of Grantee's representatives, representatives of the technical assistance group responsible for developing the program (Agua del Pueblo), and concerned MID officers.

EXTERNAL FACTORS

Difficulties have been encountered with (COG counterpart contributions to the Project. Delivery of materials by the COG has been slow and inefficient and sometimes without shipping lists.)

Government repayment procedures for materials purchased by communities and municipios have been slow and cumbersome as have been other GOG counterpart contributions. These factors, in addition to the 1976 earthquake, caused many delays in the implementation of the Project.

(Inflation in the cost of materials which followed the earthquake raised the costs of each of the water-latrines projects, thus lowering the total number of systems which could be built and beneficiaries served.)

INPUTS

(Inputs in the form of materials, trained personnel, community labor, and financing have been reasonably satisfactory with the exception of long delays encountered with the GOG contributions. USAID, CARE, Peace Corps, Agua del Pueblo, and the Ministry of Health have all coordinated in the provision of inputs to the Project.)

OUTPUTS

(A methodology concerning the introduction of potable water systems and latrines has been developed and demonstrated which stimulates community involvement in all stages of planning, construction, and maintenance of the systems as well as their usage.) This methodology includes several stages of community preparation and education for the commitments they will have to make in the planning, construction, maintenance and management of the systems. The methodology has been demonstrated to be effective in stimulating communities to apply for and carry-out other self-help projects such as school and road construction.) Community management and maintenance of the new systems has also been excellent. Unfortunately, this methodology of community involvement has not been widely adopted by other agencies constructing potable water systems in Guatemala (both GOG and international) and the linking of latrinization with potable water systems has also not been widely adopted.

The combined population of villages where potable water systems and latrines have been constructed will be greater than 20,000

as planned, although fewer systems than originally planned will have been constructed to serve these people.) The latrinization goal of approximately one latrine per family has been met in the majority of cases. Measurements of reported latrine usage have varied from 60% to 95% in the various villages. Norms and standards for quantity of water to be made available per person per day, sizes of distribution tanks, maximum distance between groups of houses and public water outlets, and ratio of maximum instantaneous rate of water use in rural highland communities to the average rate of use (design parameters) have been established by Agua del Pueblo.

Several Guatemalan professionals have received on-the-job training in connection with the Project. Unfortunately, several of them will be leaving the Project when CARE and USAID withdraw their support due to the fact that the GOG cannot match the salaries they received from CARE. All three Guatemalan professionals working full-time on the Project will be leaving in September for employment in private agencies.

PURPOSE

The purity of the water provided to beneficiaries meet acceptable standards and the amount provided at public taps equals or exceeds 60 liters/person/day. Reported latrine usage varies from 60% to 95% but no parasite counts have been taken to measure the possible reduction of fecally-transmitted communicable diseases. Because of the vast number of other external factors it is difficult to demonstrate a cause-effect relationship between provision of potable water and latrines and reduction of infectious disease.

A number of villages have planned and carried out additional self-help projects during or following their participation in this project. Rural health technicians from the local health posts have been involved in each of the projects especially in health education aspects. Their role as promoters of community health has thus been strengthened.

GOAL

Although it is difficult to measure the quality of life in villages objectively, the Project has provided easy access to larger

amounts of potable water and induced village residents to use latrines, thus improving sanitary conditions within the villages. Women (and in many cases men as well) (spend less time carrying water from long distances and thus have more time to devote to their families, communities, and economic activities.) The (attitude of self-help has also been instilled in the Project beneficiaries lessening their perceived dependency on external bodies and aiding them in meeting future problems.

BENEFICIARIES

Beneficiaries of the Project are the 21,000 people who will have received the benefits of a potable water system and latrines plus experience in planning and managing self-help projects. Other beneficiaries include the rural health technicians whose role has been strengthened in rural Quiché, members of the Ministry of Health's Division of Environmental Sanitation who have received training, and members of the local municipio governments who have gained experience in providing assistance to local communities within their jurisdiction.

Potential beneficiaries of the Project include the many GOG and international organizations planning or currently providing potable water systems in Guatemala through the use of a tested model for initiating community involvement in the provision of such systems.

UNPLANNED EFFECTS

Three technicians hired by CARE to work full-time in the Project have not been absorbed by the GOG because their salaries are higher than similar positions within the GOG. This will adversely affect the continuation of the Project when foreign assistance is withdrawn.

LESSONS LEARNED

For the purpose of continuity and replication, it (would have been better to train government-salaried employees to carry out the Project even though they may have been less technically qualified.)

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Part II
Page No. 5

SPECIAL COMMENTS OR REMARKS

The attached annex to this PES is the report of the social impact evaluation of the Project performed by James Mondloch October-November 1978.

EVALUATION OF CARE/AID RURAL POTABLE
WATER AND LATRINE CONSTRUCTION PROGRAM

(November 13, 1978)

SUMMARY OF THE CURRENT PROJECT SITUATION

A. Introduction

In 1975, the CARE/AID Rural Potable Water and Latrine Construction Program (henceforth, the Project or, the Program) for rural villages in the Department of El Quiché, Guatemala was initiated. The original plan was to install approximately 21 water-latrines systems in some 30 rural communities which were to be selected out of about 200 potential target communities by the following criteria.

- i. An adequate water source - i.e., it would provide a year-round supply of pure water, it is located relatively near the village, and is above the village so that a gravity flow system may be utilized.
- ii. The willingness of the villagers to cooperate.
- iii. The probability of being able to obtain the legal right-of-way to the water source.

At the end of the three-year program (ended September 30, 1978) a total of 15 projects had been completed and inaugurated providing potable water and latrines to approximately 9,500 villagers (CARE estimate). As was planned at the initiation of the Project, CARE and AID withdraw their personnel and financial support. The Ministerio de Salud Pública y Asistencia Social, Dirección General de Saneamiento Ambiental (henceforth, Saneamiento Ambiental) of the Government of Guatemala (GOG) now has full responsibility for the continuation of the Program.

B. Project Purposes

In the original Project Proposal, from CARE to AID, May 1975 (pp. 4-5), and, in the Supplement to this Proposal, June 16, 1975 (p.1), the following groups of purposes of the Project were stated:

i. To create sanitary and hygienic living conditions for the beneficiaries by providing them with sufficient amounts of pure water for household uses, and latrines for reducing the quantity of human feces excreted where disease-carrying flies can breed on them.

ii. To create precedents, organizations, and initiatives for future community self-betterment.

iii. To enhance the TSRs' (Rural Health Technicians') ability to work in rural communities as a result of their role in the project.

C. Quantity Indicators

The following quantity indicators are available for determining the degree to which the above purposes have been accomplished by the end of the Project:

i. The number of villages and people who have easy access to potable water and latrines at the end of the Project, as compared to prior to the Project.

ii. The existence of and the continued functioning of betterment committees in all of the target villages.

iii. The improved status of the TSRs involved in the Project in the villages where they worked, as well as their continued work in those same villages.

As will be discussed in detail below, in sections Outputs, Purpose, and Beneficiaries, the five Project sites visited will be evaluated on the degree of correspondence between the three stated purposes and the quantitative indicators of accomplishment. The conclusion is reached that, in general, there exists a good correspondence between the purposes and indicators, and, that in spite of some delays and defects the Project is to be considered a success.

EVALUATION METHODOLOGY

A. Reason

The reason for the evaluation is to judge the social impact of the Project on the target villages in El Quiché

where water-latrines systems were installed. From the very outset, evaluation of accomplishments has been one of the essential components in the Project design:

"CARE will initiate a comprehensive evaluation of the functioning of the water system and latrine construction program. Their importance to health cannot be doubted, although meaningful measurements of health impact would cost more than can be economically justified. Therefore, we will not attempt an analysis of their impact on public health. We are interested primarily in the actual importance and use of the projects by the people, and the people's response to education with respect to the whole program.

---- The evaluation of a finished product is an essential part of any project of directed change because it gives engineers, planners and medical technicians a chance to see the impact of technology on the target group, along with being a measure of the project's success. This will help to minimize the repetition of mistakes on future projects and to give an indicator of necessary follow-up work." (Project Proposal - May 1975: pp. 41-42)

In order to judge the social impact of the project, the following facets are to be evaluated:

- i. The presence and use of latrines.
- ii. Maintenance status of the water systems.
- iii. Status of village water committees.
- iv. Whether other community-action projects have been initiated consequent to the community's participation in this project.
- v. Prevalence use of the water systems.
- vi. Methods of water storage.
- vii. Amount of water used.

viii. Diversion of water for commercial purposes.

B. The following written materials were used in this evaluation study:

(i. Baseline data were gathered from AID and CARE files in Guatemala City and Santa Cruz del Quiché. The contractor supplemented these written data with interviews with AID and CARE officials who participated in the Project. +

ii. A ten-page questionnaire was designed having as its purpose the elicitation of the information sought in the Summary, part C. i-iii and the Evaluation Methodology, part A. i-viii of this report. (A copy of this questionnaire is attached to this report.)

C. Site Selection

Five of the 15 completed projects were visited by the contractor during six days in the Department of El Quiché. These 5 sites include a total of 9 villages:

1. Chuaquenun, Quiacoj, and Chijuc in the municipio of Joyabaj.
2. Pasaguay, also in Joyabaj.
3. Saquillá I, Saquillá II, and Xepocol in the municipio of Chichicastenango.

These five sites were selected on two criteria:

i. When inaugurated - two early sites (Chuaquenun- Quiacoj - Chijuc and Coontalá) and three recently inaugurated sites (Saquillá I - II - Xepocol - Pasaguay - and Chicú 2° B) were selected.

ii. Accessibility - of the sites visited all but Quiacoj and Chicú were accessible by vehicle.

D. Data Collection and Analysis

1. Interviews: The questionnaire was memorized by the contractor and used as guide in interviewing TSRs,

CARE employees and the Project Community Improvement Committee (henceforth, Committee) members, and villagers. The interviews were performed in the setting of informal conversations during which attempts were made to touch on all the points of the questionnaire. At no time, however, was a questionnaire displayed in the presence of the person being interviewed. It was assumed that individuals would be less defensive and more informative in such an unstructured setting. All interviews were conducted in the native language (Quiché, or Spanish) of those being questioned.

These informal interviews took place in the homes of the people, or, in the case of the TSRs and CARE employees, they were conducted in places of work, or on the roads and trails while enroute to Project sites, or while inspecting installations.

Shortly after the completion of an interview, the contractor would fill in the questionnaire using the information he had gathered. A total of 51 interviews were conducted:

<u>Persons Interviewed</u>	<u>Number</u>
CAPE officials and employees	2
TSRs who have worked on the Project	3
Committee members	9
Villagers	<u>37</u>
TOTAL	51

ii. Manner of conducting site inspections: At each site several public water installations were seen. Then house visits were made, being certain to include a sampling of residents using public water installations and those having private installations. At each home visited an informal interview was conducted with the residents, and the water and latrine installations were seen.

iii. Analysis and write-up: In the analysis and write up phase of this evaluation the information gathered

from the baseline data, the questionnaires, and personal observations was used.

iv. Quality of Data: Due to the following factors most of the data used in this evaluation are "soft", i.e., frequently not quantifiable, and statistically not representative:

- 1) The unquantifiable nature of much of the information sought, or the impossibility of obtaining exact data. (I.e., the degree to which latrines are used.)
- 2) The short duration of, and the limited personnel involved in the study.
- 3) The large number and wide geographic distribution of the beneficiaries of the Project.

However, in spite of these limitations, the data presented in this paper are an accurate reflection of the present status of the Project, especially a village-level perspective.

EXTERNAL FACTORS

Not relevant at this time.

INPUTS

As was mentioned earlier, the CARE/ATD participation in the Project terminated at September 30, 1978. The contractor was present in El Quiché during the last days of October and was able to observe the reaction of the Guatemalans who have worked in the Project. There was a general feeling of sadness at the prospects of losing the U.S. technical, organizational and financial participation in the program. There was also a general feeling that the project would not continue to flourish as it had during its first three years of existence. Two reasons given for this pessimistic outlook were: the GOG will not match the funds that the U.S. agencies have contributed, and competent and experienced personnel will be replaced with less qualified political appointees. During my days in El Quiché, I observed that work at the CARE office had

almost come to a complete stop except for a couple of projects already in the construction phase. The attitude was one of "let's wait and see; there is no sense in beginning any new projects until we know whether or not we will be here to work, and whether there will be new funds to finance them."

One of the goals set down at the outset was to turn the Project over entirely to the GOG by the end of the three-year CARE/AID participation in it (Project Proposal - May 1975: pp. 29-30). If the general attitude of the Guatemalan participants in this project can be taken as indicative, the prospects of its continued efficient operation are not very promising. (See the Project Proposal, May 1975: pp. 15-16; and the AID Project Proposal, 1978: pp. 7-10, for brief discussions of the failures to work efficiently in past potable water projects as well as the present one.)

OUTPUTS

A. At the outset of the Project in 1976, 15 (approximately) water-latrines systems were in some 30 villages serving about 25,000 people in the Department of El Quiché. At the end of the year period of CARE/AID participation, on September 30, 1978 a total of 15 projects were providing potable water to approximately 25,000 people in 19 villages. Besides, three other projects in other villages, having a total population of 10,000, are still in construction.

B. Delays

Of the 15 projects already inaugurated, 10 inaugurations have taken place since 1976. Delays in getting the work underway, and the failure to reach the projected output, are due to several factors:

i. Bureaucratic delays in the inauguration of two months (PIE-1, July 1976: 1-2).

ii. Earthquake reconstruction, and materials from the Project during March, 1976.

... project sites were more
... expected (ibid.).

... commitments to the
... manpower, equipment, and funds
... (ibid., pp. 7-10).

... are stated as follows:

... of purity in the water
... as well as increasing the
... and reducing the
... disease-carry-
... This first group of
... and hygienic living
... (Project Proposal -
... 4-5).

... and predecessors, organizations
... will be asked for community self-
... utilize voluntary labor, village
... locally available materials. This
... is aimed at encouraging the continuation
... communities involved in self-improvement
... to play a more positive
... development of themselves,
... (ibid., p. 5).

... Technicians')
... a part of
... to May 1975
... 1975; pp 1.)

... (EOPS) condi-
... of the Project (Project
... verifiable
... completion

... thousand El Quiché
... will have easy
... and will

ii. A fully functioning rural potable water and latrine construction program will be demonstrating the application of improved techniques in this field to other groups involved in this activity.

iii. Rural Health Technicians who have coordinated their efforts with the project will continue to stimulate community improvement projects and will continue to serve as health educators and to practice medicine.

iv. Villages which have directly benefited from the Project will continue to be involved in other self-improvement projects.

v. Women in the communities directly benefited by the project will have more time to devote to their families, communities and/or economic activities.

C. Each of these five approved EOPS conditions will now be examined in order to see how they measure up to the actual achievements of the Program as of September 30, 1978.

i. The proposed EOPS condition of providing potable water and latrines for approximately 20,000 - 25,000 El Quiché Indians has not been fully realized. As stated above in section called Outputs, by September 30, 1978 a total of 15 water-latrine systems had been inaugurated and were functioning benefiting approximately 9,520 people in 19 villages. (CARE estimates - October 1978.) So at the completion of the CARE/AID involvement in the Project approximately 42% of the proposed number of beneficiaries had potable water and latrines. The officially studied reasons for the failure to reach the proposed 20,000 - 25,000 beneficiaries were given in section called Outputs. However, CARE estimates (October 1978) that if and when all of the projects that are presently in the construction, design or selection phases are completed the total number of beneficiaries will rise to approximately 19,000, or about 85% of the originally projected 20,000 - 25,000 beneficiaries.

ii. The Project in all of its coordinated facets - technical, administrative, and sociological - is probably the largest and best planned one of its kind

ever to be undertaken in Guatemala. The details of each of those facets of the program have been documented by CARE and are available to other agencies (e.g., GOG) involved in potable water-latrines projects. In addition to the sizeable amount of written materials available, a large number of technicians both Guatemalans and Americans have worked on the Project, and have accumulated a vast amount of knowledge and experience which they can apply to any future projects of this kind. It is hoped that the improved techniques developed in this project in addition to any recommendations for improvements, such as the ones that will be offered in this report in Section called Lessons Learned, will be made an integral part of any future potable water-latrines programs in the country.

iii. In the post inauguration phase of the Project, the TSRs are to continue working in the target communities in such programs as community improvement projects health education and curative medicine.

In at least three of the nine villages that I visited the role of the TSRs in the Project was taken over by the GOG's Inspectores de Saneamiento. In the villages where the TSRs actually participated in the programs, they were especially active in the preconstruction phase of the program carrying out such tasks as site selections and community and committee organization. The three TSRs interviewed stated that they gave as much as 80 - 85% of their time to the projects in the preconstruction phase. This claim of a large investment of the TSRs' time in the Project contradicts the statement found on page 4 of Planning, Implementation, and Evaluation Report - July - October 31, 1976, "only 25 Rural Health Technicians have been assigned to the departmental activities instead of the projected 30. Only 4 may be giving as much as 1/5 of their time, and the remaining 21 assigned to the Department give 1/15 of their time to the Program."

When I called these conflicting figures to the attention of one El Quiché TSR, Julio Hernández, he explained that this report was written when the projects had just gotten off the ground and there was still little to do. In fact, it is difficult to determine just how much time each TSR involved in the Project gave to it.

But in the villages where the TSRs did work on the Program (e.g., Diego Xirum Calel in Chijuc, Joyabaj) the villagers interviewed were favorably impressed with and grateful for the TSR's help in the organizational and educational phases of the Program.

The Program design calls for the active participation of the TSRs in every phase of the Project from site selection to the post-inauguration maintenance phase (Supplement to Project Proposal - CARE/AID Potable Water and Latrine Construction Program - CARE/Guatemala, June 16, 1975: pp. 2-4; and Project Proposal, May 1978: pp. 37). In fact, a detailed guide was drawn up for the TSRs working in the program. This guide specifies the duties of the TSR in each phase of the project.

In actuality the TSRs' participation in the projects where they did work was almost exclusively limited to the pre-construction phases of the Program. It appears to frequently be the case that after a project is terminated, the TSR who worked there has little or no further contact with the village. For example, Diego Xirum in Joyabaj told me that he has not been back to Chijuc, a village where he worked on the Project, since the inauguration in December 1977, almost a year ago. (I was told in the CARE office in El Quiché that one case of where the TSR has continued to work in a target village in the post inauguration phase is that of Juan Ordoñez García in Xecataloj, Sacapulas. I was unable to visit that community in order to verify the report).

TSRs questioned as to why they abruptly stopped working in the target villages after inauguration of the facilities gave the following reasons:

- 1) Too busy to return.
- 2) Did not have any reason for going back.
- 3) The sites are too far to be reached easily from where the TSR is centered.

My observations are that, contrary to what the EOPS for this Project envisioned, the TSRs, in the post

inauguration phase, generally do not continue to work in the villages where they helped with the water-latrines projects.

In section called Lessons Learned of this report, specific suggestions will be made for improving the TSRs' participation in future potable water-latrines programs.

iv. One of the conditions expected at the end of the Project was that the reorganized or newly formed betterment committee for each target community would continue to be involved in promoting other community self-improvement projects after the inauguration of the water-latrines project in its community.

Before discussing new committee-initiated community projects, it is important to point out here that 100% of the 19 committees in the 15 completed projects continue to function actively in the maintenance phase of the water-latrines Program. In all of the villages it is the committee's responsibility to collect the monthly water fee (Q0.25 for public outlet, and Q0.35 for a private outlet) and supervise the use of these monies, for maintenance of the system and other community betterment projects. It is their duty to be the liason between the community and Saneamiento Ambiental for any problems with the system or for soliciting new installations.

In one of the villages I visited (Chicudá 2° B, Chichicastenango) the committee members were making periodic house to house inspection of latrines checking on maintenance and use. In one project comprised of three villages, Saquillá I, Saquillá II and Xepocol, all in Chichicastenango, the three committees meet every two weeks with each other and with their respective communities also every two weeks. At least, part of the time in each of these gatherings is spent educating the people about the need for maintaining and using their latrines.

In each of the villages that I visited, I asked what specific new projects the committees have begun since the inauguration of the water-latrines system. CARE also recently surveyed six village betterment

committees with the same purpose in mind. The result of my survey and the CARE survey are combined below:

My Survey

- 1.) Chuaquenun, Joyabaj - no new project ^{1/}.
- 2.) Chijuc, Joyabaj - new school being solicited.
- 3.) Quiacoj, Joyabaj - no new project.
- 4.) Pasaguay, Joyabaj - new bridge construction.
- 5.) Saquillá I, Chichicastenango - stoves project.
- 6.) Saquillá II, Chichicastenango - no new project.
- 7.) Xepocol, Chichicastenango - new school and road.
- 8.) Chontala, Chichicastenango - new school, road improvement, electric light.
- 9.) Chicua 2° B, Chichicastenango - no new project (water-latrine system just inaugurated in September, 1978).

CARE Survey

- 10.) La Hacienda, Cunen - new school.
- 11.) Xix, Chajul - opening road.
- 12.) Xecataloj, Sacapulas - no new project.
- 13.) Las Ruinas, Santa Cruz del Quiché - no new project.
- 14.) Chijtinamit, Chichicastenango - school, oratory.
- 15.) Chucalibal, Chichicastenango - social center.

^{1/} The betterment committee at Chuaquenun existed prior to the water-latrine program and before the initiation of that project it had already constructed a school, obtained electricity and made a road.

Of the fifteen committees surveyed, nine of them have initiated additional betterment projects in their villages since the inauguration of the water-latrines projects. Six committees have not yet initiated new projects. However, of these six it should be noted that it is quite certain that at least three of them (Chuaquenun, Saquillá II and Chicua) will initiate new projects soon:

<u>Committee</u>	<u>Reason for Optimism About Probability of Future Projects</u>
1. Chuaquenun	An old committee with a record for work.
2. Chicua	An enthused committee-still has not had time to plan and initiate a new project.
3. Saquillá II	Continually stimulated by meetings with active committees in Saquillá I and Xepocol.

I do not have sufficient data to permit a judgment about the likelihood of future projects initiated by the committees in other 3 villages (Xecatuloj, Las Ruinas, and Quiacoj).

The EOPs conditions regarding new self-improvement projects has been well met. One hundred percent (100%) of the committees in the fifteen completed projects are active in the maintenance phase of the water-latrines program, and nine out of fifteen (60%) of the fifteen committees surveyed have initiated new projects, while three more almost certainly will (a total of 80% success).

Much of the continued enthusiasm of the committees can be attributed to the leadership training cursillo that each group (with the exception of the committees in La Hacienda and Santa Clara, both in Cunen) participated in. There are no plans for such cursillos in the future, but there is a need for them in order to guarantee the continued active functioning of the committees.

In section called Lessons Learned suggestions will be made for maintaining the committees enthused and active in the maintenance phase of the Project.

v. The final EOPs found in the proposal is that women, freed from the burden of hauling water long distances, will have more time for other activities (e.g., family, community, and economic).

In the nine villages that I visited, the water project has made a dramatic change in the daily routines of the women benefited. Prior to the installation of potable water the women, in some places (e.g., Chicua, Chichicastenango) aided by the men, spent a great deal of time and energy hauling water from drinking and cooking to their homes. The sources of the water were often contaminated rivers, streams, and springs frequently long distances away over torturous mountain trails. A study done in a town in the Department of Sololá shows that women there spend as much as 45 man-days/year hauling water.^{2/}

The women beneficiaries of the Project now have a continued supply of clean water within, at most, a few yards from their homes. For this reason the women with whom I spoke in the villages I visited were unanimously very pleased with this new labor and time-saving convenience.

The original Project Proposal calls for the measuring of the distances over which water must be hauled before and after the installation of the water in a representative number of villages as part of the evaluation (Revised AIP - CARE/AID Rural Potable Water and Latrine Construction Program. CARE/Guatemala, Oct. 8, 1975; pp. 6). However, it was impossible to collect such detailed data during this limited evaluation study. But my own observations together with the conversations I had with the villagers clearly show that there has been a drastic reduction in these distances in the benefited villages.

The May 1975 Proposal, pp. 27, states that the women in Guatemalan rural villages besides hauling

^{2/} Geellette, Tom & Lynn. Investigative study on Lucas Tolimán, Sololá, 1974. Unpublished

drinking water every day, generally have to make several trips a week to the same water sources in order to wash clothes. In many instances this lack of clean, conveniently located water for washing clothes has not been resolved by the installation of the water system. This deficiency in the Project will be discussed in detail in section called Lessons Learned and recommendations will be made in this regard for future water-latrine projects.

The Project has been a very successful one if judged by this EOPS. Life for the beneficiaries in the target villages, especially the women, has been made much easier in that they spend much less time and energy hauling water than they did prior to the installation of the water systems.

GOAL/SUBGOAL

Not relevant at this time.

BENEFICIARIES

A. Introduction

As mentioned earlier, as of Sept. 30, 1975 approximately 9,500 people in nineteen villages in the Department of El Quiché have received latrines and potable water. The majority of these beneficiaries are Quiché-speaking Indians. However, in three of the villages that I surveyed in Joyabaj (Chuaquenun, Chicuj and Pasaguay) the beneficiaries are predominantly Ladinos (culturally non-Indian).

In the May 1975 proposal, p. 42, the main emphasis to be given in the Project evaluation was stated in the following manner:

"We are interested primarily in the actual importance and use of the projects by the people, and the people's response to education with respect to the whole program."

In keeping with this proposal of an evaluation of the Project from a village-level point of view, the remainder of this section will examine three related, and, at times

overlapping, facets of the Project in relation to its beneficiaries. These three facets are: Education, Latrines, and Potable Water.

At times, some of the information provided here will have already been touched on in earlier sections, but for the sake of the coherence and integrity of the study it will be repeated.

B. Education

The educational component of the water-latrines Project was declared to be an essential part of the program:

"A program to educate the communities in the use and maintenance of the new facilities will be begun before construction is completed."
(Revised AIP for Project, Oct. 8, 1975 - p.12)

At the community wide level a total of three presentations were given in each project:

- i. What is disease?
- ii. How to construct, use, and clean your latrine.
- iii. How to care for the water in your house and some hygiene habits.

These three presentations were given in the various projects by different personnel: TSRs, Peace Corp Volunteers and Inspectores de Saneamiento Ambiental. The presentations were given in El Quiché in the communities speaking that language. If the one giving the presentation could not speak Quiché his words were translated from Spanish by a Promotor Comunal Bilingüe. It was important that all public presentations be in Quiché since most Indian women are monolingual, speaking very little Spanish. And, as was stated in the June 1975 Supplement to the Proposal (p. 13), "since the traditional role of women in rural Guatemalan society makes her the predominant user of water, much of the acceptance of the project depends on good communication between the women recipients and the technicians." The oral presentations were frequently supplemented with charts, movies, and at times, a microscope.

The Project design only called for the three above mentioned presentations in the community-wide education program. In the opinion of all three of the TSRs that I interviewed, this was the weakest element in the entire program.

It is my feeling that their criticisms of the educational phase of the project are well founded. In general, individuals are not going to be motivated to change deeply engrained cultural behavior by simply being told once or twice of the need to do so. For example, the customary behaviour for defecating in most rural Guatemalan communities is to do it in a nearby field and leave the feces uncovered. This custom is further supported in some areas (e.g., Chontalá, Chichicastenango) by the belief that both human urine and feces are fertilizer and beneficial to the soil where they are deposited. (People are not going to be convinced of the need to change such deeply entrenched behavior patterns by simply being told of the necessity to do so in two or three sessions.)

During the visits I made to the nine villages, I noted that the degree of latrine usage and maintenance appeared to vary from village to village.

One key factor that seems to account for this variation is education. In the villages that I visited where only the minimal educational requirements of three presentations were fulfilled the latrine usage and maintenance seemed fair to poor (e.g. Chuaquenun - a Ladino community in Joyabaj, and Quiacoj - an Indian community in Joyabaj). On the other hand, in villages where additional education had been given to the people, the use and maintenance of latrines appeared better (e.g. Chicué, Chichicastenango, and Chontalá, Chichicastenango). The latrines that I inspected in these two villages appeared to be in use and generally well maintained.

In both of these villages there has been additional education given to the people. In Chintalá one of the TSRs from Chichicastenango gave a number of additional instructions to the people on the need for latrines. In Chicué the nine committee members have several times gone from house to house inspecting latrines and explaining to the people the need for their use.

There is, however, at least one additional motive for using latrines at work other than a conviction of the necessity to do so flowing from adequate education. At least on three different occasions I overheard committee members telling villagers that I had come to inspect their latrines and that if they were not using them they might possibly lose their water. So at least in some cases it appears that villagers are being cajoled into using latrines rather than doing so out of a conviction of the need flowing from good education.

I have used the latrine Program to illustrate the general weakness of the educational phase of the Project. No education is needed to convince villagers of the necessity of having nearby, potable water. This is already a felt need in the lives of those who suffer daily in carrying water over long distances. However, in order that the same people comprehend the concept that contaminated water can cause disease requires a good deal of education.

There is a need for a much more intensive and long-range educational component in any future water-latrine projects than the one being evaluated has. Suggestions will be made in Section called Lessons Learned for improving the educational aspect of such programs.

C. Latrines

i. Pre-Project Status: Prior to the Project almost none of the target villages had any latrines. (The only exception that I found to this were a few old latrines that I saw in Chuaquenun and Chijuc, two predominantly Ladino towns in Joyabaj. People in these villages, as in most of rural Guatemala, customarily defecate in fields near their homes and leave the feces uncovered. It is believed at least in some of the target villages that human urine and feces are good fertilizer, and should be left in the fields.

ii. Installation: One of the program requirements was that 85% of the latrine installations in any particular village must be completed before the water installation is initiated. The obvious motivation behind this requirement was to guarantee that all or most of the villagers will have bath water and latrines installed, as the project proposal demands. As far as

I could determine from observation and questioning, the installation requirement was enforced in all but one of the nine villages I visited. The exception was Quiacoj in Joyabaj. Apparently, there was no enforcement of the installation requirement in that village, probably due to its isolation (about one hour's walk from the nearest road), and an inactive betterment committee. The houses that I visited there either had no latrines installed or the ones that did have them installed did not maintain them well.

In general, the latrines that I saw were properly installed. There were some exceptions. In Chontalá, Chichicastenango several latrines are not properly elevated above the ground level as the specifications require. I found a number of latrines that were distributed without the customary wooden cover. And, others that I saw did not have a proper shelter built around them.

iii. Maintenance: The latrine maintenance instructions given to the beneficiaries of the project included keeping the unused latrine covered, having a receptacle available for soiled paper, the frequent burning of this paper, and the regular washing of the latrine seat.

In general, the latrines that I saw were not well maintained. Dirty paper was often scattered about, and the latrines were frequently dirty and uncovered. (As noted above, many latrines were distributed by Saneamiento Ambiental without the required covers, but even in these cases the owners could have easily made one.)

iv. Use: One can generally observe (by sight and smell) whether or not latrines are being used. But, in fact, there is no feasible way to determine to what degree latrines are used. The owners can be questioned, but this always brings an answer of 100% use by all members of the household.

As noted earlier, I observed that the more education the people receive, the better they appear to use and maintain latrines. In Chuaquenun and Quiacoj, Joyabaj, the latrines that I saw appeared to be generally

TABLE

Evaluation of Latrine Usage and Maintenance

Location	Population with latrine	% of population with latrine	% of latrines in use	% of latrines well maintained
San Juan	100	100%	60%	52%
San Juan	100	100%	100%	100%
Cunén	100	100%	55%	48%
La Hacienda Cunén	?	83%	70%	53%
			<u>58%</u>	<u>52%</u>

* The figures in the last two columns may be taken as indicative of the degree of latrine use and maintenance among the beneficiaries of the Project.

ii. Installation: After a village was selected to be part of the Project, it was then determined how many households were to receive water. Each public outlet was installed to serve a maximum of 5-6 households, and was ideally located approximately equidistant from all of them. Individual household outlets were installed at the owners' request if: the village source gave sufficient water for household installations and the owner provided for the extra materials and the price of installation.

Jealousies and potential conflicts arising between the users of public vs. household outlets have generally been avoided by making clear to the villagers that at any time, given an adequate supply of water, any beneficiary can petition through the local committee and receive his own household installation.

Yet, in spite of the efforts of the plan to avoid any kind of favoritism, in at least three of the villages surveyed (Quiacoj, Chuaquenun, and Chontalá) I was told of conflicts that arose over disagreements about granting private installations. Such conflicts are generally resolved at the village level, but on at least one occasion (in Pasaguay) members of the El Quiché-based CARE team were called upon to arbitrate the disagreement.

iii. Problems arising during the installation phase: (Suggested solutions will be given in section called Lessons Learned.)

1.) Drainage: One notable lack in all of the water installations inspected is that of any provision for drainage. The excess water that is spilled either finds its own spillway, or, more often, merely remains to create mud puddles around the outlets. This accumulation of muddy water around the outlets creates a health hazard attracting domestic animals (e.g., pigs and dogs), fowl (e.g., chickens and ducks), as well as flies.

The need for providing for adequate drainage in the water projects has been brought to the attention to the El Quiché-based CARE

personnel in charge of the Program by TSR Julio Hernández. Up to the present time, his recommendations for adequate drainage have gone unheeded.

2.) Pilas: "The water installations in the Project followed the norms set down by Saneamiento Ambiental, and these norms do not call for washing pilas to be installed along with the water outlets. For this reason, very few pilas have been installed in the project." (Ing. Ortiz - Director of Project in El Quiché.)

Only three pilas installed during the Project were found in the five sites surveyed for this evaluation, and all of them are in the same site, Chicúá 2° B.

This absence of pilas for washing clothes is one of the defects of the Project. With the installation of nearby potable water, beneficiaries no longer have to walk long distances, wasting time and energy hauling water. But since pilas have not been provided with the installations, the problem of washing clothes has not been satisfactorily resolved. During the site inspections, several solutions to the clothes washing problem were observed. Beneficiaries with household installations either construct make-shift washing facilities using boards and buckets, or else purchase (price about \$15) and install their own small pila. For example, about 20 small pilas have already been installed by beneficiaries in Chicúá. However, where clothes are washed near the home, there is almost never any proper drainage provided for water water; again, creating messy conditions as well as potential health hazards.

Beneficiaries who use public outlets wash clothes in one of two ways. Many of them continue to make several trips a week to the often distant and polluted water source they have always used for clothes washing. Other (e.g., in Chontalá) have bought lengths of hose and run water from the public source to their homes where they wash

clothes with the same makeshift arrangement as described above. Besides the mess and health hazard this last solution creates, there is also a potential source of conflict between sharers of a common outlet if some of them connect a hose to it.

3.) Faucets: During the visits to the sites, several water faucets were seen in disrepair. They could not be shut off, and as a result waste, and messy, unsanitary conditions created around the outlets. In one case, for example, in Quiacoj, Joyabaj, the original faucet lasted only seven months before the owner had to go to the trouble and expense of replacing it. ✓

iv. Maintenance: (Maintenance of the water systems calls for the repair of any mal-functioning piece as well as the periodic cleaning and disinfecting of storage tanks.) ✓

The committees of each village are in charge of maintaining the systems. In all but one of the villages surveyed the committees have hired local maintenance men who have worked extensively in the construction stages of the Project and know the systems well. The wages for the maintenance men are obtained from the monthly fee that the beneficiaries pay for their water. In Pasaguay, Joyabaj, there is no hired maintenance man. In that village, the committee members rotate, each one taking his turn at maintenance.

As mentioned earlier, 100% of the committees appear to be fulfilling their duties of maintaining their towns' water systems and collecting the monthly quotas used, at least in part, in paying the maintenance men.

The continued smooth operation of the water systems in large part depends on the continued active status of the committees. Below, in section called Lessons Learned recommendations will be given for keeping the committees active in their duties.

In the five sites surveyed all of the water systems were functioning well. This trouble-free operation is probably due to a good design and

construction, as well as the newness of the installations. The CARE construction team left a certain amount of spare materials, such as pipe, at each site to be used for maintenance. It is to be hoped that Saneamiento Ambiental will continue the policy of having repair materials readily available so that breakdowns can be quickly fixed and the beneficiaries will continue to have the convenience of the regular water service to which they have become accustomed. Lack of repair materials can shut systems down indefinitely.

v. Use: The water from the new systems, as far as I could determine, was all being used for household chores -- drinking, cooking, bathing, and clothes washing. I found no indication of water being diverted for commercial uses, such as irrigation.

Previous to the installation of the new systems the beneficiaries were forced to store water in their homes. Frequently those storage containers were unsanitary, uncovered and dirty. There was no stored water found in any of the sites visited. Conveniently located outlets have eliminated the need for the beneficiaries to store water.

It was beyond the scope of this evaluation to measure the amounts of water used by the beneficiaries of the project.

UNPLANNED EFFECTS

In the section titled Inputs skepticism of the members of the El Quiché water-latrines project team with regard to the future of the project after the withdrawal of CARE/AID was discussed. One of the unplanned effects of this program may possibly be to bring into focus the contrast between the quality of the Program during the period of CARE/AID involvement and the later period after the Program has been turned over to the Saneamiento Ambiental of the GOG.

If a degeneration in the Program does occur with the change of administration, it can only serve to substantiate the conviction already held by some of those involved in the Program (e.g., employees of Saneamiento Ambiental and Committee members) of the inability, and even the unwillingness

of their government to address itself to the problems of the majority of its people. It is beyond the scope of this evaluation to attempt to judge whether such an effect would be advantageous or not.

LESSONS LEARNED

A. Introduction

(The joint GOG-CARE/AID phase of the El Quiché water-latrine Project was the most carefully planned and best executed program of its kind ever to have been carried out in Guatemala.) As discussed earlier in sections titled Purpose and Beneficiaries, the Project did well in meeting the proposed EOPS conditions.

The Program as it was designed and carried out, together with the following recommendations for improving it, can well serve as a model for future water-latrine projects both in Guatemala and other countries.

B. Recommendations for Improving the El Quiché Water-Latrine Project.

Before beginning, I must make clear that these recommendations and the criticisms from which they flow are based upon my short, and rather superficial contact with the Project. They are meant to serve as constructive ideas that may be useful in future projects, and are in no way intended to detract from the admirable job done by the agencies and personnel involved in the planning and execution of this phase of the Project.

1. Recommendations for Improving the TSRs' Role in Future water-latrine Projects: As was mentioned in the section titled Purpose, in the programs in which the TSRs were involved, their greatest participation occurred during the pre-construction phase. From that time on, their participation rapidly decreased until by the post inauguration (maintenance) phase they were generally completely uninvolved in the Project, and frequently even failed to return to the target villages. In order that the TSRs maintain their contact with the villages, the following recommendations are made:

1.) (The TSRs will have the ongoing tasks of instructing and motivating the Village Improvement Committees in their region after the completion of the water latrine projects.) This task will be accomplished through periodic cursillos which they will organize and give. In these cursillos they should teach and discuss, the basic concepts of disease and hygiene. They should encourage the committee members to continue to be active in maintaining and inspecting their village installations, and instructing the members of their villages about the need for clean water and latrine use. They should help and encourage the committees to look for and initiate additional community betterment projects. ✓

2.) The TSRs, along with the committees, should continue to be active in the target villages teaching the people and discussing with them the basic concepts of disease, its causes, and the lack of sanitation (e.g., dirty water and exposed feces). ✓

3.) In order to be able to effectively carry out recommendations 1.) and 2.), the TSRs must understand and respect the villagers concepts of disease and hygiene. There are indications that are already being taken to implement this recommendation. One TSR told me that the study of concepts of disease and curing will soon be introduced into the curriculum at the TSR training center in Quiriguá. ✓

4.) In order to carry out recommendations 1.) 2.) and 3.), it is important that the TSRs understand and speak the language of the people. In the Dept. of El Quiché, there are now 28 TSRs assigned. Only 11 of them (about 38%) speak Quiché. Hopefully in the future TSRs will be recruited from and assigned to their own areas, or at least to areas where they can understand and speak the language of the people. ✓

- ii. Recommendations for Improving the Betterment Committee's Role in Future water-latrine Projects:
Much of the success of any project, especially in

the maintenance phase, depends upon the local committee. It was seen earlier in the case of latrines, there appears to be a direct relationship between the quality of a community's committee and the degree to which it maintains and uses its latrines. The more active and enthused the committee, the better the latrine use and maintenance in the village.

The following recommendations are made with the aim of improving the participation of the committees in the water-latrine and other projects:

- 1.) The members of committees should (continue to participate in periodic regional cursillos) organized and directed by the TSR of their region.
- 2.) Committees should (regularly meet with their villagers and discuss ideas about disease and hygiene,) as well as new projects that are to be initiated. In these local meetings, the ideas presented in the regional committee cursillos should be discussed.
- 3.) It is the task of the committees to announce and gather the villagers for the visits of the TSRs.
- 4.) Committee members should periodically inspect all (or a representative member of) the latrines in their village checking to see if they are being used and maintained, urging the people to live up to their duties in this regard. This may seem like an impossible task, but it really is not as different to perform as it might appear. For example, in Chicud where such periodic inspections are being carried out, there are nine committee members and one hundred and twenty latrines installed. This means that each member has to inspect only about 13-14 latrines.

ii. Recommendations for Improving the Installations, Use, and Maintenance of Latrines:

- 1.) (In order to avoid the discomfort of cold latrine seats made of cement in highland climates,

the possibility of supplying wooden seats along with the wooden latrine covers should be considered.) ✓

2.) (A simple latrine designed to be used in the squatting position should be considered and experimented with. Such a latrine may have several advantages over the cement type currently being used.) ✓

- a. Squatting is the position the villagers are accustomed to when defecating.
- b. There is medical evidence that the squatting position offers more protection against hernias than the sitting position.
- c. This type of latrine would eliminate the problem of the cold cement seats.

3.) Latrines should be inspected periodically by committee members to insure use and proper maintenance. Since exposed feces do present a serious health hazard for communities, the possibilities of imposing sanctions on those villagers not complying with latrine use and maintenance regulations should be considered. For example, non-compliance could be sanctioned with the suspension of water rights.

4.) (Local committees along with the TSRs should be responsible for educating the villagers in the need for proper latrine use and maintenance.) As discussed earlier, such a health education process involves much time and effort and must be continued after a water project has been installed. ✓

iv. Recommendations for Improving the Installation, Use and Maintenance of the Potable Water Systems:

1.) One of the notable deficiencies noted in almost all of the water installations is the lack of adequate drainage for spilled water (see section titled Beneficiaries). In any future projects every water installation should be provided with adequate drainage otherwise, with

the installation of water, one health problem is resolved (e.g., clean water is provided), while another is frequently created (e.g., mud puddles form around the outlets attracting animals and flies).

2.) In the section titled Beneficiaries the need for clothes washing pilas in water projects was discussed. In future projects, the feasibility of installing adequately drained pilas at every water outlet should be considered.

a. Large pilas (accommodating 6-8 persons) would be installed at public outlets.

b. Household water installations would be made only on the condition that the owner purchase and install a pila at the same time.

3.) Some of the faucets currently being used on water installations are malfunctioning. Such breakdowns cause waste of water, as well as added expenses and inconvenience for the users. In future projects, the possibility of obtaining a more durable type of faucet should be considered. For example, a spring type of faucet currently in use in some water projects in Guatemala seem to provide trouble-free operation as well as help avoid the waste of water (such faucets, however, are probably not suitable for pilas because for them to operate manual pressure must be exerted on the tap).

SPECIAL COMMENTS OR REMARKS

Attachments:

- A. A summary of the five sites surveyed in this evaluation.
- B. A copy of the questionnaire used in the evaluation.

Attachment "A"

A SUMMARY OF THE FIVE SITES
SURVEYED IN THIS EVALUATION

(These data have been taken from CARE records)

Project Site	Population	Public Water Outlets	Household Water Outlets	Latrines Installed
Chuaquenun, Quiacoj, Chijuc - Joyabaj (Inaugurated Dec. 1977)	654	29	39	150
Pasaguay - Joyabaj (Inaugurated May 1978)	144	10	24	26
Saquillá I, Saquillá II, Xepocol - Chichicastenango (Inaugurated April 1978)	1,866	84	314	311
Chontalá, Chichicastenango (Inaugurated Oct. 1977)	1,181	57	0	226
Chicuá, Chichicastenango (Inaugurated Sept. 1978)	640	7	96	120
TOTALS	<u>4,485</u>	<u>187</u>	<u>473</u>	<u>833</u>

ATTACHMENT "B"

QUESTIONNAIRE

WATER-LATRINE PROJECT

1. Personal

A. Name:

B. Age:

C. Where born?

D. Where have you lived for the past ten years? How long have you lived in El Quiché?

2. Education Constraints of the Project

A. Pre-construction & Construction Phases:

i. Were the people in your site instructed in:

a. the need for

1.) latrines?

2.) possible errors?

b. the correct use of:

1.) latrines?

2.) the water system?

c. the maintenance of:

1.) latrines?

2.) the water system?

ii. What media were used (talks, movies, charts, etc.)?

iii. In what language(s) were the presentations given:

a. for latrines?

b. for water?

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- iv. By whom:
- for latrines?
 - for water?
- v. For how long:
- for latrines?
 - for water?
- vi. What was your role in this phase of the education program?
- latrines?
 - water?
- vii. Do you feel that the people were convinced by the program of the need of:
- latrines?
 - potable water?
- viii. (Only if a, a, or b. was answered NO) Why not?

ix. Post-inauguration phase:

1. Are the people in your site still being instructed in:
- the need for:
 - latrines?
 - potable water?
 - the correct use of:
 - latrines?
 - potable water?
 - the maintenance of:
 - latrines?
 - water systems?

ii. What media was used:

a. Latrines?

b. water?

iii. By whom:

a. for latrines?

b. for water?

iv. How frequently:

a. for latrines?

b. for water?

v. What is your reason:

a. for latrines?

b. for water?

vi. Do you feel a need for
education about the

a. latrines?

b. potable water?

vii. (Ask only if appropriate)

8. Any suggestions or comments
provided for the latrine

9. Maintenance and Use of the Project

A. Water Facilities

1. Use

Where did you people use
the project?

1.) How far from their homes?

116
117
118

10 minutes a day?

for the old sake?

... washing, bathing,

...?

...?

... use in one hour?

... more?

... of serving public

... of users of public
... private faucets?

... of complaints for helping

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vi. Maintenance

a. Who is in charge of maintaining the water system?

- 1.) Do they do it?
- 2.) What exactly do they do?
- 3.) How often?

b. Is the system working well? (do people get sufficient amounts of clean water all year round?)

- 1.) If NO, what is (are) the problem(s)?
- 2.) If NO, who do you call for repairs?
 - A. Do they do them?
 - B. Promptly?
- 3.) Are the faucets working alright?
 - A. If NO, what is the problem?
 - B. Do the people keep them shut off when not in use?

c. Do the people pay a quota for their water?

- 1.) How much?
 - A. Is it too much:
 - B. Too little?
 - C. Should they pay?
 - D. Why
- 2.) How often?
- 3.) Who collects?
- 4.) What is it used for?
- 5.) What controls are there to guarantee proper collection and use of the money?
- 6.) Do all the people pay?

7.) Any problems arising from payment system?

d. Do you have any suggestions or complaints for improving the maintenance of the water system?

B. Latrines:

i. Use

a. How many homes served by water in your site have latrines? If not all, why not?

b. Are they all useable? If not why not?

c. Are you aware to what extent the people in your site are using their latrines? How do you know?

1.) Do you have some method of keeping track of this?

2.) What is your method?

d. Out of every ten adults in your site whose houses have latrines, how many would use them?

1.) Always:

2.) Frequently:

3.) Occasionally:

4.) Never

e. Out of every ten children in your site whose houses have latrines, how many would use them?

1.) Always:

2.) Frequently:

3.) Occasionally:

4.) Never:

f. How do people who do not use latrines dispose of feces?

- g. At the beginning of the project, did the people want latrines? If not, why not?
- h. Do pressures exist in the community:
 - 1.) For using latrines?
 - 2.) Against using latrines (e.g. mockery)?
- j. Are you (are the people) aware that there is another type of latrine designed for squatting? Which do you (they) think preferable (sitting type or bath equal squatting type)?
- k. Do you have any suggestions or complaints helpful in increasing the use of latrines?

ii. Maintenance

- a. Do the owners of latrines on your site maintain them?
 - 1.) If YES,
 - A. What kind of maintenance?
 - B. How often?
 - 2.) If NOT, why not?
- b. Are the latrines inspected:
 - 1.) By whom? Do you have a role here?
 - 2.) How often?
 - 3.) With what results?
 - 4.) Any sanctions to enforce maintenance?

4. TSRs - A Self Evaluation

- A. Where do you presently work as a TSR?
- B. Full time?
- C. How long have you been there?
- D. Do you feel your TSR training has been well adapted to help you meet the needs of the people in your location? If not, any suggestions for improving the training program?

E. Did (does) your working in the water-latrline program enable you to work more affectively in your community than you could before the project?

- 1.) If not, why not?
- 2.) If yes, in what ways?

F. Have you worked in the water-latrline program?

- i. Where?
- ii. Only one village?
- iii. For how long (in each)?

G. What did (do) you do in:

- i. The selection phase of the program?
- ii. The construction phase of the program?
- iii. The post-inauguration phase of the program?

H. Approximately how much of your total working time did (do) you dedicate to the water-latrline program in:

- a. the selection phase?
- b. the construction phase?
- c. the post-inauguration phase?

I. What specific training and guidelines were you given for this project?

- a. Were they practical? Why?
- b. Any suggestions for changes or additions to these guidelines for their use by TSRs in future water-latrline programs?

5. Belterment Committee:

A. Was there one format for the project in your village?

B. Make up?

C. How were the members elected?

D. What was (is) its designated role in the project in:

- i. The pre-construction and construction phases?
 - ii. The post-construction phase?
- E. Did (does) it function well in:
- i. The pre-construction and construction phases?
 - a. If YES, in what ways?
 - b. If NO, why not?
 - ii. The post-inauguration phase?
 - a. If YES, in what ways?
 - b. If NO, why not?
- F. In the project did the committee have the support of:
- i. The municipal government?
 - a. If YES, in what ways?
 - b. If NO, why not?
 - ii. The people?
 - a. If YES, in what ways?
 - b. If NO, why not?
- G. Does the committee still function?
- i. If NOT, why not?
 - ii. If so, what community projects (H2O, latrine and others) is it involved in?
 - iii. Does the committee have the support (moral, financial and physical) in these projects:
 - a. Of the municipal government?
 - a. If so, how?
 - b. If not, why not?
 - b. Of the people?
 - a. If so, how?
 - b. If not, why not?

- iv. What is your evaluation of the committees activities?
- v. Were you working with it?
 - a. If YES, in what ways?
 - b. If NOT, why not?
- ii. Do you have any suggestions or criticisms for improving the work of betterment committees?

6. Municipal Govt

- A. What role did it play in the project:
 - 1. Pre-construction & construction phases?
 - 2. Post-inauguration phase?
- B. What interactions did it have on the project with:
 - 1. You, TSR?
 - 2. Betterment committee?
 - 3. Community?

7. Outside agencies:

Comment on the following agencies involvement in the project in all stages:

- A. CARE.
- B. GGG (specify):
- C. PEACE CORPS.
- D. Promotores Sociales: