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A.I.D. Loan 492-U-049, 049A & 049B

A.I.D. Project No. 492-0291

10p.

AMENDMENT NO. 1
TO
PROJECT
LOAN AND GRANT AGREEMENT
BETWEEN
THE REPUBLIC OF THE PHILIPPINES
and the
UNITED STATES OF AMERICA
for
BARANGAY WATER

Dated: September 27, 1979

BARANGAY WATER PROJECT

AMENDMENT NO. 1 TO PROJECT LOAN/GRANT
AGREEMENT NO. 492-U-049A & 049B

THIS AMENDMENT NO. 1, entered into as of the 27th day of September 1979, between the REPUBLIC OF THE PHILIPPINES ("Cooperating Country") and the UNITED STATES OF AMERICA, acting through the AGENCY FOR INTERNATIONAL DEVELOPMENT ("A.I.D."),

WITNESSETH THAT

WHEREAS, the Cooperating Country and A.I.D. entered into Project Loan and Grant Agreement No. 492-U-049 (the "Agreement") on May 3, 1978 to provide \$3,184,000.00 (a loan amount of \$3,000,000.00 and a grant amount of \$184,000.00) for the Project;

WHEREAS, the Cooperating Country has requested additional A.I.D. financing for the Project; and

WHEREAS, A.I.D. has allotted an additional loan amount of \$3,000,000.00;

THEREFORE, the Cooperating Country and A.I.D. hereby agree to amend the Agreement as follows:

A. Section 3.1. The Grant; The Loan. The phrase "not to exceed Three Million U.S. Dollars (\$3,000,000.00) ('Loan')" is deleted and the phrase "not to exceed Six Million U.S. Dollars (\$6,000,000.00) ('Loan')" is substituted therefor.

B. Section 3.2. Cooperating Country Resources for the Project.
In subsection (b) the amount "\$3,179,000.00" is deleted and the amount "\$4,799,000.00" is substituted therefor.

Condition Precedent to Disbursement
under Amendment No. 1

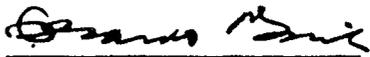
Prior to the first disbursement, or to the issuance by A.I.D. of documentation pursuant to which disbursement shall be made, of the loan funds added by this Amendment No. 1, the Cooperating Country shall, except as the Parties may otherwise agree in writing, within ninety (90) days of the execution of this Amendment No. 1, or such additional period as the Parties may agree to in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D. an opinion of counsel acceptable to A.I.D. that this Amendment No. 1 has been duly authorized and/or ratified by, and executed on behalf of, the Cooperating Country, and that it constitutes a valid and legally binding obligation of the Cooperating Country in accordance with all of its terms.

Attached hereto is a revision to Annex I of the Agreement.

Except as expressly amended herein, the said Agreement shall continue in full force and effect in accordance with all of its terms.

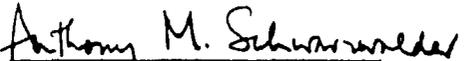
IN WITNESS WHEREOF, the Parties to said Agreement, each acting through its duly authorized representative, have caused this Amendment No. 1 to be signed in their names and delivered as of the day and year first above written.

REPUBLIC OF THE PHILIPPINES

By: 
Gerardo P. Sicat

Title: Minister of Economic Planning
(Director-General)
National Economic &
Development Authority

UNITED STATES OF AMERICA

By: 
Anthony M. Schwarzwald

Title: Director
U.S. Agency for
International Development

DESCRIPTION OF PROJECT

Community water systems in most of the Philippines are either non-existent, woefully inadequate, or provide water which is considered unsafe for human consumption. Studies indicate that approximately 80% of the population lives outside an organized system altogether. The remaining 20% of the population that does come under the jurisdiction of a water system is in one way or another seriously inconvenienced or beset by a host of problems related to the provision of an adequate quantity and an acceptable quality of potable water.

Most of the water utilities serving provincial communities were constructed in the 1940's. Since that time, the migration from more remote areas and the normal growth in population have increased the size of the barangays many times over. Without exception, the utilities have not been expanded to keep pace with the resultant population growth. These factors, together with the failure to adequately maintain the previously constructed facilities have reduced the capabilities of the utilities to meet the needs of today's consumers.

The Barangay Water Program is a rural program. It aims at providing domestic water to small rural communities under 10,000 people in size.

The objective of the program is to improve the general health and productivity in the areas to be serviced by the Project and in so doing improve the quality of life.

A more specific and intermediate objective is to establish the capability of selected local governments to identify, plan, organize and

install functional barangay cooperative water systems and facilities with an indigenous maintenance capacity to provide safe, reliable, low cost water through small systems with appropriate technology and organization.

The Project will be developed through the Barangay Water Program, a department of the Provincial Development Assistance Project (PDAP) in the Ministry of Local Government and Community Development (MLGCD), working in close cooperation with other pertinent national and international agencies and the respective participating provinces and cities have demonstrated both the institutional capacity and the procedural means to execute relatively sophisticated infrastructure projects. It is anticipated that an addition of personnel will be required by MLGCD at the national level.

The individual subprojects to be undertaken at the community level will emanate from the Provincial/City Water Resource Development Plans. The latter will be an integral part of the overall provincial/city comprehensive development plan. The preparation of such documents will be the responsibility of the various provincial and city development staff personnel working in coordination with the appropriate local government, collateral agencies at the provincial level, and the respective barangays to be assisted. Identified subprojects that are deemed technically sound, economically feasible, acceptable to the respective local government councils, and meet the criteria outlined by the Barangay Water Program will be eligible for funding.

The intent of this Project is to assist local government units in the formation of water associations or cooperatives, with the capacity

to deliver safe water; be reliable; service as large a segment of the community as is economically possible; match the growth of the population over the life of the system; maintain rates and charges that are within the financial means of all customers, and at the same time be self-sustaining.

Training will be an essential element of the Project. It will be offered on an on-going basis through the Barangay Water Program and A.I.D. for both the participating local governments and the barangay water associations/cooperatives.

Participating provinces and cities numbered 20 in FY 78; 29 in FY 79; and approximately 40 in FY 80. More than 400 local government officials connected with provincial engineering, provincial development planning staffs, and other offices vital to the Project's success will be trained. Water Resource Inventories and 5-year plans will be prepared.

The participating provinces will also be required to increase both their planning and technical capacity in order to conduct feasibility studies, prepare project designs, train local institutions, implement the construction of the subprojects and levy assistance in the major repair of systems. Additionally, Barangay Water associations and cooperatives will be organized and trained.

Over the life of the Project, about 200 associations, cooperatives, and committees, depending upon the size and type of projects selected, are expected to be organized and trained.

The USAID is providing \$6 million to the Government of the Philippines in an initial loan to finance the capital costs of waterworks systems discussed herein.

Additional USAID supports include both technical and commodity assistance.

BARANGAY WATER PROJECT
AMENDED PROJECT FINANCIAL PLAN
 (Source and Application of Funding - \$000)

Project No. 492-0291

PROJECT INPUTS	AMOUNT FOR A FULLY FUNDED PROJECT				
	Loan	A.I.D. Grant	Borrower/Grantee	Other	Total
1) Construction of Waterworks System (FAR) & Overhead	6,000 ^{1/}	-	2,100	-	8,100
2) Technical Assistance, Participant Training, and Commodities		184	-	-	184
3) Budgetary Support Training, Operations, Salaries, Administration and Consulting Services			2,724	-	2,724
TOTALS	6,000	184	4,824	-	11,008

^{1/} For AID loan accounting purposes, earmarking and drawdowns shall be made on the first in, first out basis, as follows:

<u>Loan No.</u>	<u>Allotment No.</u>	<u>Amount</u>
492-U-049B	424-64-492-00-68-93	\$2,863,149
492-U-049	848-64-492-00-68-93	3,000,000
492-U-049A	948-64-492-00-68-91	136,851
	TOTAL	<u>\$6,000,000</u>

Annex I
 Attachment I
 September 1979 - 2nd Revision

UNITED STATES GOVERNMENT

Memorandum

TO : Distribution

DATE: October 22, 1979

FROM : ASIA/PD/EA, J. R. Nussbaum

SUBJECT: A.I.D. Loan 492-U-049, 049A and 049B
A.I.D. Project No. 492-0291
arangay Water Project
Amendment No. 1 *

A.I.D. Loan No. 492-U-049, 049A and 049B
A.I.D. Project No. 492-0291
Barangay Water Project
Project Authorization Amendment **

Attached for your information and files are copies of the subject documents, authorized by the Director, USAID/Manila.

Attachments: a/s (asterisks denote appropriate distribution)

Distribution:

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PROJECT REVIEW PAPER
(PRP)

BARANGAY WATER PROJECT

USAID/PHILIPPINES

LOCAL GOVERNMENT

AD/PD

SEPTEMBER 15, 1976

BARANGAY WATER PROJECT

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AGENCY FOR INTERNATIONAL DEVELOPMENT PROJECT REVIEW PAPER FACESHEET		1. TRANSACTION CODE <input type="checkbox"/> A A = ADD <input type="checkbox"/> C C = CHANGE <input type="checkbox"/> D D = DELETE	PRP 2. DOCUMENT COD. 2
3. COUNTRY/ENTITY Philippines		4. DOCUMENT REVISION NUMBER <input type="checkbox"/>	
5. PROJECT NUMBER (7 digits) <input type="checkbox"/> 492-0291 <input type="checkbox"/>	6. BUREAU/OFFICE A. SYMBOL ASIA B. CODE <input type="checkbox"/> 04 <input type="checkbox"/>	7. PROJECT TITLE (Maximum 40 characters) <input type="checkbox"/> Barangay Water Project <input type="checkbox"/>	
8. PROPOSED NEXT DOCUMENT A. <input type="checkbox"/> 3 <input type="checkbox"/> PP		9. ESTIMATED FY OF AUTHORIZATION/OBLIGATION A. INITIAL FY <input type="checkbox"/> 78 B. FINAL FY <input type="checkbox"/> 79	

10. ESTIMATED COSTS (\$000 OR EQUIVALENT \$1 -)						
A. FUNDING SOURCE	FIRST FY 78			LIFE OF PROJECT		
	B. FX	C. L/C	D. TOTAL	E. FX	F. L/C	G. TOTAL
AID APPROPRIATED TOTAL	3,099		3,099	3,184		3,184
(GRANT)	(99)	()	(99)	(184)	()	(184)
(LOAN)	(3,000)	()	(3,000)	(3,000)	()	(3,000)
OTHER 1.						
U.S. 2.						
HOST COUNTRY						2,150
OTHER DONOR(S)						
TOTALS						5,334

11. PROPOSED BUDGET AID APPROPRIATED FUNDS (\$000)							
A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. FIRST FY 78		LIFE OF PROJECT	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	H. GRANT	I. LOAN
(1) PH	519	250	545	54	3,000	184	3,000
(2)							
(3)							
(4)							
TOTAL							

12. PROJECT PURPOSE (Maximum 400 characters) "X" IF DIFFERENT FROM PID

To provide safe, reliable, low cost, water to deprived residents of selected small rural communities (under 5,000 population).

13. DATA CHANGE INDICATOR. WERE CHANGES MADE IN PID FACESHEET DATA, BLOCKS 12, 13, 14, OR 15? IF YES, ATTACH CHANGED PID FACE SHEET.

1 = NO
 2 = YES Block 15 - PID Facesheet attached

14. PLANNING RESOURCE REQUIREMENTS (Staff/Funds)

- 1) TDY consultant to help develop Project Paper - 3 man weeks = \$3,000
- 2) TDY consultants to help develop Project Paper - 6 man weeks = \$6,000

15. ORIGINATING OFFICE CLEARANCE SIGNATURE <i>Thomas L. Rose</i> Thomas L. Rose		16. DATE DOCUMENT RECEIVED IN AID/W. OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION	
TITLE Assistant Director for Provincial Development		DATE SIGNED MM DD YY 09 19 76	

I. Priority and Relevance:

The successful implementation of the Barangay Water Project will lead to better health, wider employment, greater productivity, increased income and will ultimately contribute to a higher perceived quality of life for the residents of the participating communities.

The purpose of the project is to improve health by assisting selected local government units to institutionalize the capacity to identify, plan, organize and install functional cooperative water systems with an indigenous maintenance, operational, and managerial capability.

The priority which accrues to the project is principally derived from the serious health problems which it addresses; the beneficiary group which it targets; and the manner in which it relates to other important Congressional, Agency, Mission and Host Country mandates.

The intended beneficiaries of the subprojects (water systems) are the myriad small, outlying, and remote rural communities whose citizens are largely on the outskirts of national economic life. Thus, projects and services of the sort proposed will not only be the most visible improvement in the community but in all likelihood will represent the most significant development in the near geographical area.

The barangay is a small community usually ranging in size from a few hundred to a few thousand people. There are approximately 43,000 barangays in the Philippines. Most of them are without adequate water supply systems and the rate at which these communities are gaining access to safe water is far too slow to keep pace with their respective and growing populations.

The scarcity of safe water for drinking, bathing, and laundry purposes poses serious problems throughout the developing world. The health problems due to waterborne disease are generally more serious in Asia than elsewhere in the world and they are particularly acute in the Philippines. Statistics provided by the Department of Health (DOH) reveal that death in the Philippines due to waterborne diseases per 100,000 population is double the rate of Thailand, quadruple the rate of Singapore, and thirty-eight times greater than the rate prevailing in Hong Kong.

Furthermore, medical doctors interviewed while gathering information for the preparation of this paper indicated that more than 80% of the illnesses which they treat are directly related to waterborne parasites and diseases such as typhoid, cholera, and bacillary dysentery. Doctors further reported that the majority of their patients once treated and cured return to the same environment and contract the same or more serious diseases.

The World Health Organization (WHO) indicates in studies that it has conducted, "Village Water Supply" published by the World Bank, March 1976, that most of the diseases killing children under five years of age can be linked directly to contaminated water. Studies further reflect that in much of Asia waterborne diseases are among the three major causes of death. Thus, public health workers with the World Health Organization (WHO) hold that the provision of a safe and convenient water supply is the single most important activity that can be undertaken to improve the health of people living in rural areas. In this context the undertaking of a drinking water project has particular relevance to the improvement of health.

The improvement of the Barangay water supply has relevance to other sector goals. It increases employment, productivity, and income by opening opportunities for small scale industry not previously possible without a supply of water. Regarding productivity, experience around the world with water projects shows that the availability of potable water has at least three important effects: 1) it reduces absenteeism due to health disorders; 2) it provides additional opportunities for employment; and 3) it releases people, whose responsibility it is to find and transport water, to the undertaking of more gainful economic activities.

The proposed water project will play a supportive role in furthering several other existing and planned host initiatives. First, it is in keeping with efforts to reach the economically less privileged in rural areas. It would also play a complementary role to the Government's on-going and prospective integrated development projects in the Bicol Region and on Panay Island. The Mission is also currently supporting waterwork development projects through assistance to the Local Water Utilities Administration (LWUA).

The execution of this project would, in effect, focus on similar problems and priorities within a different geographical framework and at a lower level of complexity than the Local Water Utilities Administration (LWUA) Project. The project is in complete consonance with the Local Government Project objectives to strengthen the capacity of local government at provincial, municipal and barangay levels. Moreover, the Barangay Water Project incorporates a number of features common to other successful, on-going Mission supported programs, e.g., the National Electrification Project, the Small Scale Irrigation, and the Rural Roads Program, to mention a few.

This Project will place special emphasis on the fifteen cities to be covered under the proposed Rural Service Centers Project (RSC). It is planned to give high priority to the development of water systems in those areas where the two projects, Barangay Water and Rural Service

Centers Project, coincide and when the selection criteria for water subprojects is consistent with the general philosophy of the Project.

II. Description of the Project:

Although other purposes are to be served by the provision of adequate drinking water, the chief benefits to be rendered are within the public health spectrum.

Currently, there is no national regulatory agency exercising policy for the development of water systems in all small communities.

Thus, the focus of the proposed Philippine Program will be to equip selected provinces with the capacity to deal more effectively with rural water problems within their respective jurisdictions by maximizing the use of both their own and community resources.

Neither the Mission nor the Department of Local Government and Community Development (DLGCD) subscribes merely to the construction of water systems and then leaving them to happenstance or chance once they are constructed. It is recognized that the most important, as well as the most difficult aspect of the program to achieve will be the readiness of the community to receive and subsequently maintain, operate, manage and partially repay the systems' costs once they are functional.

Organization at the community level of the sort required will necessitate both initial training, which will be conducted prior to the conclusion of the construction phase of a given subproject, and considerable in-service training at later dates. Additionally, frequent visitation and follow-up by both national and provincial personnel will be required and is envisioned to take place once the subprojects are operable. Thus, training and construction represent the two major components of the program. Both will be discussed.

A. The Program Setting

It will be useful to describe somewhat the environment in which the program is to be implemented.

In 80 to 85 percent of the rural communities of the Philippines, there is no formal water system at all. On the average, there are 600 barangays in each of the provinces. Of that number, normally 500 of them will have no water supply other than an occasional private well. Generally, wells of this type are owned by the more affluent of the rural dwellers and are not made available for popular use. When sufficient quantities of water exist in private wells, it is often sold to the public at exorbitant fees. The vast majority of the people, however, has to rely on the nearest acceptable source of water for washing clothes, taking baths, and drinking purposes. The sources of such water are commonly contaminated streams and rivers, although in some instances, underground water offers

reliable and reasonably safe drinking water. People often have to walk several kilometers to find water. Because of these conditions, a great deal of energy is lost in portering water from the source to the family homesite.

In many rural communities it is the sole responsibility of at least one member of the family to do nothing more than to carry water. Such individuals are deprived of being more productively employed in farming or other more gainful economic pursuits.

The remaining 15 to 20 percent of the barangays are nominally served by water systems. These systems, however, are grossly deficient in terms of providing reliably pure water for human consumption. Moreover, they are beset by a whole range of technical and administrative problems thus rendering them to various degrees of inefficiency.

Following are the usual characteristics of such systems:

1. Water delivery is of insufficient quality and quantity, thus failing to meet either acceptable rates of flow or bacteriological standards.
2. Chemical treatment is sporadic to non-existent.
3. Service is frequently interrupted for protracted periods.
4. The distribution network is generally in such a deteriorated state of repair that only a portion of the water generated by the system actually reaches the intended user.

B. The Problem

An analysis of the water problem reveals that there is neither a central agency nor a concrete national policy with regard to the development of rural drinking water resources for communities of the size to be benefited by this Project. The Local Water Utilities Administration (LWUA) does, under Presidential Decree No. 198 and as amended Presidential Decree No. 768, focus on the problems of local water districts but such districts are in communities of a much greater population base than those to be served under this Project. In effect, the rural dwellers have been left to their own meager devices and ingenuity to resolve their water problems.

There are a few agencies, the Bureau of Public Works (BPW), the Department of Local Government and Community Development (DLGCD) and the Department of Public Health (DOH) which have primary responsibilities to carry out other mandates but also engage in water pro-

grams. Their responsibilities for the provision of water, however, are ancillary. Their resources are greatly limited, and their organizational outreach falls well short of the intended target population. As well intended as these efforts are, they are miniscule in comparison with the problem they address and do little to satisfy current water needs much less provide for the growing demands by an ever increasing population.

In the Philippine context there is not a wealth of alternative approaches to the water problem. It is basically a local problem. It will have to be resolved largely with local resources. And it is the local government units which are in the best position to become knowledgeable about their problems and subsequently organize for solutions which are feasible.

C. The Approach

The nature and magnitude of the rural water problem in the Philippines exceeds the capacity and resources of the Central Government to resolve unilaterally. What is required, and what will be sought through this proposed Project is an arrangement whereby national, provincial, and community resources can be coordinated and brought to bear in a more systematic and orderly way on the intended end user - the rural villager.

During the three year life of the Project, twenty-five provinces will participate. The provinces will be largely those that are already participating in the Provincial Development Assistance Project (PDAP) and the medium for reaching them will be the Department of Local Government and Community Development (DLGCD). All such provinces have gained considerable experience and capacity to plan, program, budget and implement developmental undertakings. Approval of this project would enable the further definition of the existing provincial organizational capability while at the same time permitting the various participating provinces to confront the serious health problems emanating from impure and unhealthful barangay water supplies.

The institutional structure through which the program will be implemented is the same as that employed in the successful implementation of the Flood Rehabilitation Program, the Special Infrastructure Project, and the on-going Rural Roads Program. The administrative and procedural means will likewise show great similarity. The procedures will, however, be modified slightly in order to accommodate the peculiarities of a water project.

Under this project, a Management Team composed of personnel from the Department of Local Government and Community Development (DLGCD) will be formed. It will be assisted with technical advice provided by USAID.

It is visualized that the Management Team will undergo certain specialized training following the preparation of the Project Paper and then, working together, the Management Team and USAID will develop training programs to be administered to succeeding groups of provinces as they become affiliated with the Project. (See Implementation Plan).

The training anticipated will be comprehensive in nature and will prepare the provinces to plan, program, finance, and implement barangay water projects. It will also provide them with the skills required to organize, train, and advise small barangay cooperatives and water user associations.

Thus, the two major components of the program are training and construction.

1. Training

A major and most significant component of the program is training. Instruction will be offered at the national level for both the Program Management Team and provincial local government officials.

Training will also be offered at the provincial and community levels for both the leadership and the general membership of the cooperatives and associations to be established.

a. National Level

An assessment will be made of the skills required for national level managers to carry forward the Barangay Water Project. A broad range of technical, administrative, managerial and organizational skills will be provided at the outset of the project in order to upgrade the quality of the Project Management Team. Training of the nature anticipated would be largely provided in-country and by local experts familiar with the Philippine milieu. A training institution will be identified during the preparation of the Project Paper. There are several possibilities for such training one of which is the Local Water Utilities Administration (LWUA) which is funded under Grant 74-14, and Loan Agreements 492-U-033 (15a) and 492-U-042 (10a).

The Local Water Utilities Administration (LWUA) has immediate plans to develop a national training center.

A small amount of participant training under short term PIO/P is also being considered but will be funded under the core Local Government Project to which the Barangay Water Project depends.

b. Provincial Training

Twenty-five provinces will require extensive training over the three year life of the project in order to develop the knowledge and skills required to execute province-wide barangay water projects. Such training will be sponsored by the Project Management Team, other personnel from the Department of Local Government and Community Development (DLGCD), and colateral agencies as later deemed most appropriate.

The curriculum will be further delineated during the Project Paper stage, however, it will cover such subject matter as organization and management, planning, construction, waterworks operation and maintenance, the principles and practices of cooperativism, and the methodology, techniques, and regulatory aspects of organizing cooperatives and pre-cooperative associations.

Local Government officials to be trained will include: the provincial development coordinators, the provincial engineers, a representative from the provincial health office, the provincial water resource analysts (a position to be created under the Barangay Water Project), the provincial water technicians, provincial training officers, and research statisticians. Other individuals and agencies necessary for the success of the program such as the provincial treasurers, the provincial development officers, representatives from the Department of Health (DOH) and Public Works (DPW), the governors, and members of the various Sangguniang Panlalawigans (Provincial Legislative Councils) will be invited to attend relevant sessions of both the initial training programs and the periodic in-service training seminars and workshops.

c. Community Level

The main thrust of the training activities will be those which are planned for the community level. The purpose will be to develop strong, local institutions with the capacity to operate, maintain, manage, and pay for the water systems that are constructed under this Project. Strong, efficient, and knowledgeable institutions at the barangay level, are a sine qua non for the success of the Project and training will be the vehicle for imparting the requisite knowledge and skills. No construction will be undertaken by the local government units until community groups have been identified and properly trained.

Training expenses will be borne by the Department of Local Government and Community Development (DLGCD) and the provinces themselves. Three million pesos will be required for training by the Department of Local Government and Community Development (DLGCD). The provinces will be expected to pay 50% of the training costs for their staff and local officials as is customary now under joint Provincial Development Assistance Project and Department of Local Government and Community Development (PDAP-DLGCD) training programs. Training costs for the participating barangay association membership will be defrayed by the Department of Local Government and Community Development (DLGCD), the participating provinces, and the respective village organization themselves.

The specific training outputs will be reflected and in the number of national, provincial and barangay personnel trained. And it will result in the formation or strengthening of competent provincial and village organizations for the creation and operation of barangay water systems.

2. Construction

a. Projects

1) Type

The communities to be served under this program are small communities ranging in size from about 300 to 5,000 people.

The type and size of project to be undertaken will vary from community-to-community depending upon such determinations as economic feasibility, available water sources, desired level of service, and number of users. Typically, however, the communities will be around 1,500 people in size. The subprojects will generally be either wells and hand pumps; wells with electric pumps, storage tanks, and transmission facilities, or spring/stream impoundment and development; and combinations or variations of these possibilities. Gasoline and diesel powered systems will be avoided under this project. Preliminary investigations leading to the development of the Project Review Paper (PRP) indicate that a greater number of feasible subprojects will be identified than can be realistically funded. Thus, emphasis will be placed on constructing systems that can be operated by human energy, gravity flow, or electrically delivered power. With respect to electrification, high priority will be assigned to prospective systems in areas where the Rural Electrification Project is operational.

The project will be flexible with respect to the type of subproject to be selected. National and provincial personnel will not dictate the type of project to be undertaken but will rather provide a range of alternatives based on what is considered technically sound and economically feasible. The community will be guided in the selection of the type of system but the decision for project selection will ultimately rest with the community. The cost per subproject will range from ₱20,000 to ₱300,000 pesos (US \$2,500 to \$40,000).

The program will be flexible enough to accommodate a broad range of community water needs and will undertake new construction as well as the rehabilitation of existing water systems.

2) Planning, Approval and Implementation

The procedural means for project planning, approval and implementation will be that which was introduced several years ago by Provincial Development Assistance Project (PDAP) and is currently being employed in the 28 participating provinces.

In general terms the system works as follows: (also see appendices 2 & 3 for the project flow diagram).

Project requests will originate at the community level where they will ultimately be implemented. Requests of this sort will be made by the barangays to the appropriate Municipal Improvement Committee. In June of each year, the Municipal Capital Improvement Committee will consider such requests in light of existing resources and municipal development priorities. At this juncture, the committee will either accept the project for implementation, defer it for later consideration, or reject the request when it obviously exceeds all possibilities for funding under local, provincial, or national programs. In the first two instances, the project is incorporated into the municipal plan where it is scheduled for municipal, provincial, or national funding. Municipal Capital Improvement Programs (MCIP's) are later submitted to the Provincial Capital Improvement Committee (CIPC) in September and project requests are again reviewed and assigned a priority for implementation based on the availability of funds and the preliminary priority of the project as determined by pre-feasibility studies and as compared with other projects in the Provincial Water Resources Development Plan (PWRDP), (a document to be developed by each participating province in the course of implementing the proposed Barangay Water Project). Subprojects demonstrating a favorable degree of feasibility will be accepted for eventual implementation based on their respective priority rankings in the Provincial Comprehensive Plan (PCP). Projects demonstrating the highest degree of feasibility will be implemented first.

In October of each year, an Annual Implementation Plan (AIP) will be developed by the province for the fiscal year immediately following. The Annual Implementation Plan (AIP) will include the name, the estimated cost, the location, and preliminary cash flow information for all of the projects to be implemented during the referenced fiscal year.

Under this Project, the number of subprojects to be implemented in a given period will range from four to eight per province and cost between ₱400,000 and ₱700,000 pesos depending upon the size of the subprojects selected. The Annual Implementation Plan (AIP), once approved by the Sangguniang Panlalawigan (The Provincial Legislative Council), will be submitted to the Department of Local Government and Community Development (DLGCD) for review and approval.

Copies of the Annual Implementation Plan (AIP) will also be furnished to the United States Agency for International Development (USAID) and the National Economic Development Authority (NEDA) for information, review and possible comments.

With minor variations, perhaps on cost estimates or on questions of design, projects will be approved when the Annual Implementation Plan (AIP) submission is reasonable and the provinces have already demonstrated the financial and technical capacity to carry out projects of the magnitude proposed.

When the Annual Implementation Plan (AIP) is approved, the province will be notified of a tentative fixed amount reimbursable figure for each subproject. Both the barangays concerned and the provincial engineering offices will be informed of the approval. The barangay associations, which will have been previously trained in the organizational, managerial, and technical aspects of operating a system of the sort acquired and which will have already assessed its membership, will deposit an amount equal to the estimated annual operation and maintenance costs of the system. The deposits will be made at a local bank, possibly a rural bank, in an interest bearing trust account and will be later drawn down to meet expenses as they occur.

The provincial engineer's office will then begin preparing the detailed design along with plans, costs, and specifications. Such plans will be reviewed by a contractor who will provide architectural and engineering services and monitor the imple-

mentation of the subprojects. When agreement on plans, costs, specifications and design is reached between the provincial engineer's office and the ASE firm, construction will begin. The subproject may be implemented by the provincial engineer's office or by a private contractor whichever proves to be more advantageous to the province. Conceivably, some subprojects will involve a combination of effort by the provincial engineer's office and a private contractor. Upon successful completion of the construction of a subproject, the province will be reimbursed, by the Department of Local Government and Community Development (DLGCD) as previously agreed, and the subproject will be transferred to the designated community organization. From this point hence, the barangay association will be responsible for the maintenance, operation, repair, repayment and general management of the system delivered.

The number of subprojects to be constructed during the life of the project will range between 250 and 480 depending upon type and size of the individual subprojects and the mixture of new construction versus the rehabilitation of existing systems.

3. Dollar Loan

The Barangay Water Project anticipates a dollar loan in the amount of US\$3,000,000.

The loan will be disbursed through a Special Letter of Credit (SLC) to the Philippine Government. There will be periodic adjustment to the SLC in amounts corresponding to the funds provided to provinces under the fixed amount reimbursement scheme.

4. Personnel

National level project administrators will be required to implement the program. A project management team consisting of five professionals and possessing a wide range of experience and skills in engineering, environmental sanitation, organization and management, and the principles and practices of

cooperatives will be required in the Department of Local Government and Community Development (DLGCD).

The Project Management Team which is already partially formed, will be responsible for developing the program, scheduling its activities, and monitoring the progress of national, provincial, and community endeavors. The Project Management Team will also play a key role in the training of local government personnel.

Additional provincial personnel will likewise be required. The provinces will need to increase their personnel complements in both the provincial development staffs and the provincial engineering offices.

Specifically, a water resource analyst and a full time training officer will be required, except where full time training officers currently exist, as additions to the Provincial Development Staff (PDS). Periodically, the PDS will have to provide staff or support to conduct an annual audit of each operating water system to determine financial and management soundness and, as necessary, assist in implementing rate adjustments to meet changing requirements.

The provincial engineer will be required to add one engineer to his rolls. The engineer will perform numerous tasks related to planning, construction, and training. He will be assisted by at least two water technicians who, within a variety of responsibilities, will have the chief assignment of manning the waterworks repair shop which will be installed in the provincial equipment pool.

The total cost for additional personnel generated by this project is 1) \$28,000 at the national level, and 2) \$430,000 at the provincial level (25 provinces). Both figures represent salaries for the life of the Project.

Personnel requirements beyond those listed are not foreseen. The concept is to build upon the existing personnel capability which is already in-place and considerable in the various provinces to participate.

III. AID and Other Relevant Experience:

During the late 1940's and 1950's AID predecessor agencies assisted the Philippine Government's "Liberty Well" and other programs to drill wells and provide pumps in strategic rural communities located throughout the country. That program had dramatic impact in a time of political turmoil and obvious need for potable water in the rural villages. Little was done, though, in building up the indigenous local capability to maintain and service the wells and pumps. Today, almost all of these water systems are inoperable.

Later, in the 1960's, the Presidential Arm on Community Development (PACD) continued to provide limited technical and commodity assistance to rural village groups for digging and drilling wells, spring development, and even water distribution projects. But, here again, not enough emphasis was put on the organizational aspects of projects to insure proper well treatment, pump repair, and distribution line maintenance.

The Bureau of Public Works (BPW) and the National Water and Sewerage Authority (NWSA) are two national agencies which have played a role in the design, construction, and management of municipal and city water systems in the country. Traditionally, however, neither agency focused attention on the barangay requirements for potable water.

Studies in the early 1970's resulted in the abolition of the National Water and Sewerage Authority (NWSA) and the creation of the Metropolitan Waterwork and Sewerage System (MWSS). Still, the MWSS charter is only within the Metro-Manila area, cities and large municipalities.

In 1973 the Local Water Utilities Administration (LWUA) was established by presidential decree and a development loan agreement was signed with the United States Agency for International Development (USAID) in the amount of \$15 million providing for feasibility studies, technical assistance, and off-setting some foreign exchange costs of initial projects. A second loan paper in the amount of \$10 million was recently signed and a third loan for \$10 million is expected in 1977. Additional funding amounting to \$16.2 million has been obligated by the Asian Development Bank (ADB) for selected city systems under Local Water Utilities Administration (LWUA).

Here again, the target consumer of the Local Water Utilities Administration (LWUA) effort is not the rural barangay resident. Only municipalities and cities of 30,000 population or above normally qualify for Local Water Utilities Administration (LWUA) assistance and only after a local water district has been formed.

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At present, there is no GOP program or agency enjoined and supported to provide potable water to rural barangays although some 70% of the population resides in the barangays.

No attempt is contemplated with the Barangay Water Project to duplicate the Local Water Utilities Administration (LWUA) program. Indeed, there are two distinct target groups -- the rural barangay families and the families which live in the cities and large municipalities. The Barangay Water Project will aim at rural barangay communities of approximately 300 to 5,000 people and with very few exceptions it is expected that subprojects will not be constructed in larger communities.

Although, there will be no requirement to form a LWUA-type local water district, this project, working through the Department of Local Government and Community Development (DLGCD) and the provincial governments -- will design, construct, manage, and maintain barangay water systems on a cooperative, mini-district basis and will encourage the cooperative-like associations to federate, on a provincial level, within two years after their formation.

IV. Beneficiaries:

The proposed Barangay Water Project is a rural project. It will directly benefit at least two specific and identifiable groups.

The first identifiable group to receive initial benefits will be the modest farmers and fishermen who make up the small, rural farming and fishing communities which will receive drinking water from the projected water systems.

Such communities stand to benefit in several ways. The more obvious benefits will be in terms of improved conditions of health and sanitation, greater convenience through the increased accessibility to potable water, greater productivity as a result of less sickness, and higher family incomes. These communities will also benefit through an increased level of community organization and a dynamic approach to the problem solving process which can be utilized to resolve still other community problems.

Between 250 and 480 small communities will be benefited directly by this Project. Small communities of the kind envisioned represent a socio-economic mozaic and are difficult to describe. There is no profile, per se, which accurately depicts them all. Characteristic of them, however, would be many of the following attributes: 1) they will be small, rural, basically farming or fishing communities and, 2) they will be representative of the lowest 40 percent of the nation's income group with a large percentage of the communities falling in the lower 20 percent of the country's economic strata.

According to a recent study by the World Bank, Priorities and Prospects For Development - A Basic Economic Report, World Bank, May 1976, 80 percent of the total number of families with incomes which fall below the "minimum needs" budget in the Philippines are rural dwellers. The cited study further reflects that farm families, which comprise the majority of the rural population and represent the principal target group for this Project, have gross incomes that place them among the "poorest of the poor." The average family income of such groups, as determined by the referenced study, is ₱2,200 per annum, approximately (US\$300).

The Mission considers that the Project is directed to the economically least privileged group in the country. The Government of the Philippines also concurs and supports the selection of small, rural villages as the beneficiaries of the Project. Moreover, the task of assuring that inputs result in the desired outputs will be relatively manageable. The challenge to the Philippine Government in implementing this Project will be not only to reach the poor but also to work with communities of such demonstrated poverty and at the same time develop the degree of administrative and fiscal self-sufficiency required to insure the viability of the systems once they are built.

A second group to benefit will be the participating local government units - provincial, municipal and barangay. The institutional capacity of many of these local government units is already reasonably well developed. However, in the course of implementing infrastructure projects as represented by the Barangay Water Project, and by administering training programs for village associations, opportunities will occur to further refine and develop both planning and implementation skills. This process will have a positive effect on the developmental capacities of the participating provinces and should lead to better planned and more meaningful development programs for the future. Along these lines, marked institutional growth has been observed on the part of provinces participating in other Provincial Development Assistance Project (PDAP) infrastructure programs, e.g., the Flood Rehabilitation, the Special Infrastructure, and the on-going Rural Roads Program. It is anticipated that this project will have a similar effect on strengthening all levels of local government and will do much to spawn the desired "spread effect."

The Role of Women

The influence this Project will have and the special opportunities it will create for women cannot be quantified at this time.

A few preliminary observations, however, are that the convenience of adequate quantities of water will considerably lighten household chores such as laundering clothes, preparing meals, and cleaning house. This should provide women with more time for other activities.

Traditionally, the role of the Filipino woman within the family in farm business units is that of monetary manager of the particular enterprise. As this Project is directed toward the establishment of water users associations; it is therefore likely that women will play an influential role, especially with respect to fiscal matters in those organizations.

The Philippine experience with the implementation of similar projects has opened a wide variety of opportunities for the advancement of women in key managerial and professional roles. Especially evident are the large numbers of women who are working in local government in both the provincial development and the provincial engineering offices as engineers, planners, research statisticians, and infrastructure analysts.

In other programs assisted by the United States Agency for International Development (USAID), e.g., Barrio Irrigators Service Associations (BISA/FSDC) and the National Electrification Administration (NEA), women hold a wide variety of managerial positions.

It is believed that the proposed Project will continue the already positive upward mobility of women in development roles as have the other programs.

V. Feasibility:

An improved barangay water supply, both in terms of quality and quantity, inevitably leads to a more effective utilization of human resources, less time lost to illness, increased employment potential, more job opportunities and greater productivity, all of which contribute to generally higher earnings and an improved standard of living. It is difficult, however, to predict the exact amount of economic benefit to be realized.

The principal reason for an investment in a potable water project is to improve health and sanitary conditions. It is generally accepted that a healthy people are more productive than those who are not. Consequently, a basic assumption underlying this Project is that it will contribute to the economic well being of the participating families and communities in terms of increased earnings and the saving of money otherwise spent on medical and related services and in some cases the savings of the cost of purchasing water for domestic use.

The more critical feasibility concerns for this project involve the decision of whether or not to implement an individual subproject at the barangay level.

The question of whether or not to go ahead with a subproject will be treated on a community-specific basis and the criteria will not be those which are normally considered by the on-going infrastructure development projects viz: cost savings, induced agricultural production and internal rate-of-return. The issue is basically one of viability. And, the basic question will be the adequacy of the subproject in terms of the capability of the community to operate, maintain, repair, manage and amortize a reasonable percentage of the initial cost of the water system in question.

Several factors will need to be explored in the subproject's planning stage. They relate to technical, financial, and organizational matters. All will be addressed and the pertinent issues will be resolved before the construction of a subproject will begin.

A. Feasibility Considerations

1. Population

It is recognized that because of dispersion and other reasons, the entire population of a given community will probably not be active users or members of a proposed water association. The minimum system to be constructed, however, should be large enough to accommodate the existing membership of the association and take into account, as well, additional users generated from both the population-at-large and the

growing population.

2. Complexity of the System

Care must be exercised to design systems which are large enough to adequately handle the population, as discussed above, without exceeding the local (managerial and financial) capacity to operate and maintain them. There are some clear examples in the Philippines of systems too sophisticated for the capability of local management. Under the current proposal, technical specifications will be closely tailored to the perceived organizational potential of the village and water systems will be built accordingly.

3. Proximity and Reliability of the Source

Feasibility studies will address the various alternative sources of water and types of water systems which could be implemented in a given community. For example, it is possible that the development of a distant spring, or other obvious source, might pose feasibility problems. In such occurrences, an effort would be made to find another source. Perhaps underground water in the form of a well would offer a suitable alternative to the original proposal.

Information with respect to the various water sources which exist in the community is available in partial form now through the Department of Public Works (DPW) in the Division of Wells and Springs. This kind of secondary data will be complemented by a Provincial Water Resources Inventory which will be done under the direction of the Provincial Development Staff in each member province. It will provide updated and complete information regarding the provincial water resources profile.

Another issue with respect to source will be reliability. A clear determination as to rate of flow and the expected longevity of a source will need to be made before an investment will be authorized. Investment, of course, will not be authorized for limited, or nearly depleted sources.

4. Level of Service

Another factor bearing on feasibility, insofar as it affects the cost of the system, is the desired level of service to be provided. Again, the question will have to be answered on a community-by-community, project-specific basis regarding the number of liters of water, per person, per day to be provided. In connection with this point, individual house-connections versus pub-

lic hydrants, or a combination of both, will need to be decided and will influence the cost of the system under consideration.

With this matter, as with all the others, the Barangay Water Project will attempt to provide as much flexibility in the selection of subprojects as is technically and economically sound.

5. Rehabilitation versus New Construction

This Project contemplates both the rehabilitation of existing systems and the construction of new ones. The former category would appear to represent a minority of the subprojects at this juncture, however, it is conceivable that some provinces will elect to give priority to the re-establishment and re-organization of existing, but failing, systems.

In many cases, rehabilitation might understandably offer the greatest developmental mileage for the comparative amount of money invested. If all other criteria governing the selection of projects are met, such projects would be eligible for funding. The key consideration for the rehabilitation of a system, however, will be its overall physical condition. It will do little good to repair the distribution network if the source is unreliable and deficient. Likewise it will not be advisable to replace a pump or an engine for a system whose network is riddled with leaks. Thus, rehabilitation will be permitted only when it is clearly demonstrated that the other components of the overall system are sound and economically worthy of additional investment.

6. Special Health or Social Conditions

Consideration will be given to the acceptability of a limited number of subprojects which prove to be infeasible from an economic point of view but which offer the potential to render overriding social or health benefits.

For example, a province may be confronted with a situation wherein it is not advisable from an economic point of view to authorize a subproject. Social, civic, or health considerations may be so overwhelmingly persuasive, though, that the province, despite the economic infeasibility of a subproject, may wish to underwrite it anyway because of the prospective non-economic gains to be realized. Such subprojects, for example might be appropriate in a small, deprived community with an

extremely high infant mortality rate where there is a clear connection between the death rate and contaminated water supply but there is no obvious means of establishing a viable water system under the general philosophy of the Project. Under a special arrangement, and within carefully spelled-out conditions, the province concerned would accept the liabilities for maintenance, repair, and operation of the system for a specified period of time and proceed to implement the sub-project.

The Mission proposes to undertake developmental projects of this nature in a number not to exceed ten percent of the amount of overall direct construction costs included in the Project, or approximately ₱2.3 million should be authorized for this special purpose.

Appropriate personnel in the 28 provinces currently participating in Local Government sponsored activities have received considerable training in the methodology and techniques of conducting surveys, analysing data, and preparing feasibility studies. The process, in fact, is an integral part of the implementation procedures for on-going infrastructure projects, e.g., the Rural Roads Program. Thus, a trained manpower base already exists for accomplishing the Provincial Water Resources Inventories as well as the feasibility studies for prospective subprojects. Some additional training will be required, however, for those already on the rolls. In-depth instruction will be necessary for new personnel to be employed under the project in order that a mastery can be gained of feasibility studies and other issues related to the Barangay Water Project.

Other feasibility questions will arise but they, as in the case of those already discussed, will be resolved by consultation between the appropriate communities and the respective local government units. As in the preceding issues, the ruling factor will be the capacity of the village water users association to provide an adequate system for the existing and projected population and to operate, maintain, and repay a portion of the construction costs.

B. Community Participation

Community participation will be a keystone of the Barangay Water Project. Community involvement will begin with the selection of the subprojects, continue throughout the organization, training and construction phases, and culminate with the barangay water associations assuming the ownership and full responsibility for the management of the systems, and for the partial amortization of the capital

investments made. Full utilization will be made of the communities' labor, material, and financial resources as well as of their ideas and social institutions. Indeed, the viability of the project rests on the participation of the systems' beneficiaries and their cooperative attitude and willing spirit to collect revenues and utilize them prudently.

C. Initial Environmental Examination

A "Negative Determination" is being recommended. See Attachment No. 3, Initial Environmental Examination, for a complete discussion of this issue.

VI. Other Donor Coordination:

According to the Office of Foreign AID coordination of the National Economic and Development Authority (NEDA), there is no project of this type in the Philippines being supported by International Bank for Reconstruction and Development (IBRD), the Asian Development Bank (ADB) or other donors. Nor, has it been indicated that such donors contemplate assistance in the near future to the GOP for this type of activity. The International Bank for Reconstruction and Development (IBRD) has stated in a recent report though, that "the development of adequate rural water supply systems should be given high priority in the Government's program in order to improve the level of health services in the rural areas".¹

The International Bank for Reconstruction and Development (IBRD) may possibly fund the rehabilitation and installation of up to 2,000 artesian wells on the Island of Mindoro as part of the Bank's loan assistance to the GOP's Mindoro Area Integrated Development Project. It is not clear, however, how these wells will be maintained or serviced in the future.

During the preparation of the Project Paper (PP), comprehensive discussions will be held with representatives of other potential donor countries, the International Bank for Reconstruction and Development (IBRD), Asian Development Bank (ADB), World Health Organization (WHO) and a strategy will outlined for future coordination and possible follow-on funding for barangay level water system development.

¹World Bank Report No. 1095 A-PH (May 1976) "The Philippines Priorities and Prospects for Development" Basic Economic Report Volume II, p. 134

VII. Financial Plan:

With the exception of the US technical assistance for \$184,000, for which USAID will assume responsibility, all other costs for the project initially will be borne by the Philippine Government. A SLC for \$3,000,000 will be issued as a reimbursement of an equivalent number of pesos provided by the GOP to local government units for completed subprojects.

The three major financial requirements to be met are: personnel, training, and construction costs for water systems.

The first two costs, personnel and training expenses will be borne entirely by the Department of Local Government and Community Development (DLGCD) and the participating provinces. Such funding will be provided through regular budgetary allotments and procedures.

For the latter category, subproject construction costs, the funding procedures will be as follows: 1) Annual agreements will be reached between the Department of Local Government and Community Development (DLGCD) and the participating provinces for a number of projects to be constructed on a fixed amount reimbursement (FAR) basis. (See section II "Project Description" of this paper for additional reference). 2) The province will then defray the expenses incurred for overhead costs and subproject construction costs utilizing its own funds for both project design and the actual implementation of the physical project itself. 3) Upon satisfactory completion of the subproject, (subprojects must meet quality control standards, other technical specifications, and the establishment of a viable cooperative to operate the system, and be finished on schedule), the Department of Local Government and Community Development (DLGCD) will reimburse the province with Presidential Discretionary Funds (PD No. 144) for "direct costs," (POL, labor and materials), in the amount previously agreed upon and for a value not to exceed 75% of the total cost of the subproject. The Government of the Philippines, in turn, will be reimbursed periodically by the US Government through an SLC arrangement in amounts corresponding to the fixed amount reimbursement (FAR) provided to provinces by the Department of Local Government and Community Development (DLGCD).

All costs for the maintenance, operation, and repair of the systems once they are operational and turned over to the communities will be borne by the community cooperatives or water associations. The first year's operational expenses will be met by utilizing community funds deposited in escrow prior to the systems' construction. Subsequent operational expenses will be made from accumulated revenues gained from water user fees.

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It is expected that a \$3 million dollar loan agreement will be signed around October 1977, with the National Economic Development Authority (NEDA) as GOP signatory and borrower. The \$3 million dollar loan agreement will call for a forty year repayment schedule with a grace period of ten years (at 2% per annum) and amortization of principal over thirty years (at 3% per annum). The Department of Local Government and Community Development (DLGCD) will act as the implementing GOP agency, with the Project Management Staff for the Project within the Office of the Undersecretary, Bureau of Local Government.

It is the Bureau of Local Government which has national responsibility for monitoring and supporting the activities of local governments at provincial, municipal and barangay levels. The same bureau also provides the Project Management Staff for the successful Rural Roads Program.

The financial plan for the Barangay Water Project is drafted to reflect the total cost of the project and the financial obligations at each project level. Contributions toward total project funding will be from: 1) the national government, 2) the provincial government, 3) the Barangay Water Associations and 4) the USAID.

The fixed amount reimbursement (FAR) will be a key financial mechanism to achieve intended project outputs of completed water systems.

A. National Government Contribution

The National Government of the Philippines will provide Presidential Discretionary Funds under Presidential Decree-144 (PD-144) to the Department of Local Government and Community Development (DLGCD). These PD-144 funds, amounting to ₱23.8 million will be disbursed to participating provinces by the Department of Local Government and Community Development (DLGCD) in the form of fixed amount reimbursements (FAR) for approved projects but only after completion of construction and satisfactory inspection (see appendices #2 and #3).

The Department of Local Government and Community Development (DLGCD) will provide from its own regular budget funds: 1) ₱3 million for training costs, 2) ₱2.38 million for A&E services, and 3) ₱.22 million for salaries and allowances of the Project Management Team.

B. Provincial Government Contribution

Each participating province will be expected to: 1) advance construction capital (direct costs) from its regular budget funds, savings or borrowings, and 2) absorb construction overhead costs.

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The former will be reimbursed from PD-144 funds. The latter, amounting to a peso equivalent of \$1 million will not be reimbursed.

The provincial selection criteria, as embodied in the Department of Local Government and Community Development (DLGCD) Administrative Procedures, will require each participating province to recruit and fund a minimum of five new technicians regarded as crucial to successful implementation of the Project. For the life of the project, this will amount between ₱60,000M and ₱168,000 per province depending upon the number of years that the province participated in the Project, or an amount of \$.43 million for all provinces over the three years.

The cost of making the Provincial Water Resources Inventory, the Provincial Water Resource Development Plan, and subsequent feasibility studies will be borne from provincial general funds and will not be reflected in this financial plan.

C. Barangay Water Associations' Contribution

A feasibility study will be prepared for each water system extracted from the Provincial Water Resources Development Plan that has been tentatively recommended for construction. If approved, the construction period will follow membership training in cooperative organization and water system operations and management.

Each feasibility study must indicate enough proof of economic reliability to insure that the water association membership will be able to amortize from 25% to 50% of the system's construction costs. Amortization of the principal at a 4% per annum interest rate will be paid to the province by the association management board over a period of not more than 10 years. These payments will be utilized in later years by the particular provinces for the generation of more water systems or for undertaking other developmental projects. Amortization payments are not reflected in this financial plan as part of the total project cost.

D. USAID Contribution

USAID's contribution will occur in the design, pre-implementation, implementation, and final evaluation stages of the Project. In the design stage, up to three TDY consultants will be utilized for as many as nine man-weeks in the preparation of the Project Paper (PP).

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During the design, pre-implementation, and implementation stages of the Project, USAID will provide a project manager's services. The costs for 36 months amount to \$.184 million.

Finally, a \$3 million dollar loan paper will be signed by October, 1977 which will provide the funding for a Special Letter of Credit (SLC) which the GOP will later use to purchase U.S. goods and/or services.

The total cost of the Barangay Water Project is \$5,334 million dollars with 59.7% being provided by USAID and 40.3% coming from the GOP and the participating local government units.

BARANGAY WATER SYSTEMS PROJECT (TABLE I)Summary Cost Estimate and Financial Plan (\$US 000)

	AID		HOST COUNTRY		TOTAL
	FX	LC	FX	LC	
1. Development Loan	3,000	--	--	--	3,000*
2. Technical Assistance	† 184	--	--	28	212
3. A&E Services	--	--	--	300	300
4. Training	--	--	--	388	388
5. Peso-Reimbursements	--	--	--	3,000*	3,000**
6. Const. Overhead	--	--	--	1,000	1,000
7. Staff Engineering & Planning (Province)	--	--	--	434	434
TOTAL	3,184	--	--	2,150	5,334

* Water System costs to be determined on an individual subproject basis and based on feasibility studies.

** Costs are not added to the Project as GOP will be reimbursed for same on a fixed amount reimbursable (FAR).

† Technical assistance to be funded under personal services contract.

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PROJECT REVIEW PAPER (TABLE 2)BARANGAY WATER SYSTEMS PROJECT (000's)Incrementally Funded Projects

(Project Summary - AID Appropriated Funds)

Country - PhilippinesPRP _____ new x Rev. # _____

(Budget Year 1978)			
Cost Components	Direct Aid	Contract Other Agency	Total
1. US Technicians †	99	--	99
2. Participants	--	--	--
3. Commodities	--	--	--
4. Other Costs * (Dev. Loan)	3,000**	--	3,000
TOTAL	3,099	--	3,099

* Obligation will occur around October 1977

** GOP will draw down on an SLC basis for acquiring goods and services as desired by the GOP.

† Technical assistance to be funded under personal services contract.

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VIII. Implementation Plan:

A. General Responsibilities

As described in the Financial Plan, the implementing national agency for the Barangay Water Project will be the Department of Local Government and Community Development (DLGCD) whose project inputs will be at the national, provincial and barangay levels. Primarily, these inputs will consist of training, technical assistance, and Presidential Discretionary, (PD-144), reimbursements.

Participating provinces will be charged with planning, surveying, designing and constructing the barangay water systems and will also have the general responsibility of training the association membership. Systems' maintenance and repair will be a barangay responsibility but cooperation from the Provincial Engineer's Office (PEO) and the Provincial Equipment Pool (PEP) will insure support for 2nd and 3rd echelon repairs. The associations will bear the costs of such repairs effected by the Provincial Equipment Pool (PEP). Working closely with the local associations, provincial authorities will audit systems annually and provide guidance and rationale for the adjustment of rates if necessary.

The barangay water association will be responsible for management and maintenance of the system as well as the amortization to the province of partial construction costs.

B. Area Coverage FY 1978-1981

The Department of Local Government and Community Development (DLGCD) intends to select participating provinces for this project from among the twenty-eight provinces that have been trained through the Provincial Development Assistance Project (PDAP). The primary reasons for this selection criterion are: 1) the relatively more advanced planning and administrative capability of Provincial Development Assistance Project (PDAP) assisted provinces, and 2) the experience that such provinces have gained in funding and implementing programs like the Special Infrastructure Program (SIP) and the Rural Roads Program (RRP) under the fixed amount reimbursement (FAR) scheme.

Previous participation in Provincial Development Assistance Project (PDAP) programs will not suffice as the only selection criterion. Membership will also depend upon the individual province's interest and ability to satisfy other requirements as outlined in the Department of Local Government and Community Development's (DLGCD's) Barangay Water Project Administrative Procedures. Two chief requirements will be the preparation and approval of a Prov-

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Provincial Water Resources Development Plan and a current budget appropriation equal to the amount of the total project costs submitted for funding in the Annual Implementation Plan (AIP).

<u>No. of Member Provinces</u> (cumulative)	<u>FY 78</u>	<u>FY 79</u>	<u>FY 80</u>
	15	20	25

(see appendix #1 for listing)

C. Barangay Water Subprojects Selection and Construction

All water systems approved for construction by the Department of Local Government and Community Development (DLGCD) will originate in the Community and be based on data contained in the Capital Improvement Programs (CIP's), Provincial Water Resources Development Plans (PWRDP's) and Annual Implementation Plans (AIP's).

Generally, the barangay membership will number from 300 to 5,000 people. The economic feasibility results for each proposed project will depend, among other requirements already stipulated, on the membership's ability to amortize from 25% to 50% of the total construction costs.

The actual design and construction of the various systems will be the responsibility of the province (including quality control). The Department of Local Government and Community Development (DLGCD) will employ the services of a local A&E firm, acceptable to the United States Agency for International Development (USAID), to approve plans, monitor construction, and make final inspections.

D. Role of USAID/Philippines

In addition to financial assistance, the United States Agency for International Development (USAID) will provide technical assistance throughout the life of the Project and for the periods of both project design and project final evaluation.

One contract U.S. Project Manager will be provided initially and, as the Project develops, a small staff of local hire personnel will be added to assist him in the advisory responsibilities.

The U.S. Project Management Staff will counterpart the GOP's Project Management Staff and advise on all aspects of the Project's design, planning and implementation. Working closely with the host agency, the Department of Local Government and Community Development (DLGCD), the U.S. Staff will make frequent field visitation

trips to the provinces in order to advise on general program matters and participate in training for local government units.

The U.S. Staff will further monitor the progress of the Project's implementation by maintaining records and files pertinent to training, community organizations, and project construction.

The role of the U.S. Project Manager is basically that of a management advisor and a monitor. He will also serve as the principal liaison officer between the Mission and the appropriate host personnel on matters related to the general planning, programming, implementation and evaluation of the Project.

E. Schedule of Implementation

1. Project Negotiations and Agreements

- a. Project Paper submitted to AID/W Apr. 01, 1977
- b. Project Paper approved by AID/W Sep. 15, 1977
- c. Loan Authorized by AID/W Oct. 01, 1977
- d. Loan Agreement drafted and signed by Government of the Philippines/GOP and USAID Dec. 01, 1977
- e. Conditions precedent to opening letters of commitments met by Government of the Philippines/GOP and USAID Apr. 01, 1978

2. Subproject Implementation and Reimbursements

- a. First group 15 provinces submit draft Provincial Water Resources Development Plans to DLGCD Jun. 30, 1977
- b. Candidate provinces submit final Provincial Water Resources Development Plan Jul. 31, 1977
- c. Department of Local Government and Community Development (DLGCD) certifies provinces eligible for FY 78 program Oct. 01, 1977
- d. Department of Local Government and Community Development (DLGCD) signs tentative sub-agreements with fifteen provinces (FY 78). Oct. 15, 1977
- e. Annual Implementation Plan (AIP) submitted . Oct. 20, 1977

VIII-4

- f. Annual Implementation Plan (AIP) approved.. Nov. 10, 1977
- g. Barangay Water Associations in first target group barangays deposit funds in escrow.. Dec. 15, 1977
- h. Budget adopted before Dec. 31, 1977
- i. Provinces begin construction (Phase I) after. Jan. 01, 1978
- j. Second group 5 provinces submit Provincial Water Resources Development Plans to DLGCD. Jun. 30, 1978
- k. Candidate provinces submit final Provincial Water Resources Development Plans Jul. 30, 1978
- l. DLGCD certifies provinces eligible for FY 79 program Oct. 01, 1978
- m. DLGCD signs tentative sub-agreements with five additional provinces Oct. 15, 1978
- n. Annual Implementation Plan (AIP) submitted. Oct. 20, 1978
- o. Annual Implementation Plan (AIP) approved.. Nov. 10, 1978
- p. Barangay Water Associations in second target group barangays deposit funds in escrow.. Dec. 15, 1978
- q. Budget adopted before Dec. 31, 1978
- r. Provinces begin construction (Phase II) after. Jan. 01, 1979
- s. Interim project evaluation by (GOP) and (USAID) May 1979
- t. Final group 5 provinces submit Provincial Water Resources Development Plans to DLGCD..... Jun. 30, 1979
- u. Candidate provinces submit final Provincial Water Resources Development Plans Jul. 31, 1979
- v. DLGCD certifies provinces eligible for FY 80 Program Oct. 01, 1979
- w. DLGCD signs tentative sub-agreements with five additional provinces Oct. 15, 1979

VIII-5

- x. Annual Implementation Plan (AIP) submitted.. Oct. 20, 1979
 - y. Annual Implementation Plan (AIP) approved.. Nov. 10, 1979
 - z. Barangay Water Associations in third group target barangays deposit funds in escrow. Dec. 15, 1978
 - aa. Budget adopted before Dec. 31, 1979
 - bb. Provinces begin construction (Phase III) after. Jan. 01, 1980
 - cc. Deadline for completion for all construction. Mar. 31, 1981
 - dd. Final reimbursement made by (DLGCD) Apr. 30, 1981
 - ee. End-of-project evaluation by (GOP) and (USAID) Oct. 31, 1981
3. Training
- a. Training of Project Management Team Jan.15-Feb.15/77
 - b. Curriculum development First Provincial Training Feb. 15, 1977
 - c. Initial Training for first 15 provinces ... Apr. 23, 1977
 - d. Plans Workshop (15 provinces) Jul. 1977
 - e. Provincial training for Cooperative Organization and O&M (15 provinces) Aug. 1977
 - f. Association Membership and Management Training (15 provinces) Oct.77-Dec.78
 - g. Workshop (15 provinces) Aug. 1978
 - h. 1st Annual Conference (15 provinces) Jan. 1978
 - i. Training for second group of provinces (5 provinces) Feb. 1978
 - j. Plans Workshop (5 provinces) Jul. 1978
 - k. Provincial training for cooperative organization and O&M (5 provinces) Aug. 01, 1978
 - l. Association Membership and Management Training (5 provinces) Oct. 1-Dec.31/78

VIII-6

m.	Workshop (20 provinces)	Aug.	1978
n.	2nd Annual Conference (20 provinces)	Jan.	1979
o.	Initial training for third group of provinces (5 provinces)	Feb.	1979
p.	Plans Workshops (5 provinces)	Jul.	1979
q.	Provincial training for cooperative organization and O&M (5 provinces)	Aug. 01,	1979
r.	Association membership and management training	Oct. 1-Dec.31/79	
s.	Workshop (25 provinces)	Aug.	1980
t.	3rd Annual Conference (25 provinces)	Jan.	1981

IX. Project Development Schedule:

Actions to begin immediately and to continue well into the preparation of the Project Paper (PP) are the following:

A. Personnel Action

Work will continue with respect to constituting the Project Management Staff. An engineer, formerly the Deputy Project Manager of the Department of Local Government and Community Development (DLGCD) for the on-going Rural Roads Program has been named to head the Project Management Team. Efforts are now in progress to identify additional personnel with complementary skills in management and cooperatives to round out the Team. What is desired is a well-rounded, interdisciplinary staff, not merely a team of engineering technicians.

B. Washington TDY Consultants

Services will be required of one sociologist for a period of three weeks to assist in conducting the following analyses: 1) the "social soundness analysis," and 2) a more detailed analysis of the potential environmental impact of such a Project. Such expertise should be made available as early as possible following Washington's determination to further proceed with the Project.

Additional TDY requirements were alluded to in the PID. Specifically, two technicians were requested to provide technical advice for, and assist in, the preparation of the Project Paper (PP). As originally envisioned, they would advise on finance, training, cooperatives, water utilities management, environmental sanitation, and the regulatory aspects applicable to those areas.

The Mission should like to reiterate the request for TDY personnel with expertise in the above mentioned areas. They are particularly necessary in assisting with the preparation of a refined feasibility study format, waterwork management, the development of rationale for establishing rate structures, and in the area of environmental sanitation.

No other special requirements are foreseen. The Project Paper (PP) will be submitted on 1 April 1977.

ATTACHMENTS

PROJECT IDENTIFICATION DOCUMENT
(PID)

BARANGAY WATER PROJECT

USAID/PHILIPPINES

LOCAL GOVERNMENT

AD/PD

MAY 28, 1976

PROJECT IDENTIFICATION DOCUMENT (PID)

PHILIPPINES - BARANGAY WATER PROJECT

I. Summary of the Problem to be Addressed and the Proposed Response:

Community water systems in most of the Philippines are either non-existent, woefully inadequate or considered unsafe for human consumption. Studies indicate that approximately 80% of the population lives outside an organized system altogether. The remaining 20% of the population that does come under the jurisdiction of a water system is in one way or another seriously inconvenienced by problems related to the provision of an adequate quantity and an acceptable quality of potable water.

Most of the water utilities serving provincial communities were constructed in the 1940's. Since that time, the migration from more remote rural areas plus the normal growth in population have increased the size of the barangays many times over. Without exception, the utilities have not been expanded to keep pace with the resultant growth. These factors, together with the failure to adequately maintain the facilities have reduced the capabilities of the utilities to meet the needs of today's consumers. Most systems are characterized by the following conditions:

- A. Water delivered is generally of a low quality. In most cases, it does not meet the proper bacteriological standards.
- B. Deliveries are generally limited with regard to both pressure and rates of flow.
- C. Uninterrupted water service is rare.
- D. Equipment (pumps, engines) and distribution lines are badly maintained and are in a generally deteriorated state of repair.
- E. Loss of water within the system is widely prevalent; and,
- F. Chemical treatment ranges from sporadic to not at all.

The reasons for these deficiencies are manifold but some of the more prominent causes for the difficulties are:

- A. Inadequate physical systems.
- B. Underutilization and mismanagement of human resources at the local level.

C. Domination of local government units by the central government.

Quite apart from the problems of existing systems, many barangays have no potable water systems at all.

There is no suitable alternative to the provision of potable water. The question is how to approach the problem. As concerned as the government might be at this time, there is no evidence to indicate that the provision of water is likely to improve based upon the capability and actions of the existing organizations. An organization for assisting local water districts, the Local Water Utilities Administration (LWUA), does exist at the national level. It provides services such as banking, technical assistance, feasibility studies, and training for relatively larger water systems than those proposed in this PID. This project is intended to help smaller communities not currently within the scope of LWUA's reach.

The intent of this proposal is to assist local government units in the formation of water consumption cooperatives with the capacity to deliver safe, potable water; be reliable; service as large a segment of the community as is economically possible; match the growth of the community; maintain rates and charges that are within the financial means of all customers, and; be self-supporting.

The water systems contemplated within this project will be relatively simple to construct and maintain. As such, they lie outside the interest of ADB, IBRD, and other international donor organizations. Ideally, the money required for such an undertaking would be obtained from the Philippine economy. Such local financing does not appear possible at this time, thus, assistance from USAID is necessary in order to provide "seed" money as well as development guidance in the initial years of the project's development.

The proposed project relates in several significant ways to both Agency and Mission mandates. First, it is in keeping with agency general initiatives to reach the economically less privileged. From the Mission point of view, it focuses on the elimination of several serious health problems in the area of environmental sanitation. It follows that healthy people are more productive than those who are not. The project is also in consonance with the Mission's objectives to strengthen the capacity of local government bodies. In this respect, the implementation of the project would contribute to a continuation of the upgrading of local government capability in the tradition of the Special Infrastructure and Rural Roads Programs. While those programs focus on economic problems through better transportation, the focus of this project is on health and the vehicle is potable water. The consequent upgrading of the quality of life in the barangays would, as well, mili-

tate for prevention of gravitation of rural population to larger urban centers.

II. Financial Requirements and Plans:

A. The estimated total project cost is ₱6.6 million.

B. Amount of AID assistance:

1. Loan \$3,000,000

The 3 million dollar loan shown in pesos expenditures by program year:

	<u>FY 78</u>	<u>FY 79</u>	<u>FY 80</u>
Source/distribution	₱ 4.5	₱ 6.0	₱ 7.5
Source Only	1.5	2.0	2.5

C. Host government peso expenditures:

	₱ 7.0	₱ 9.0	₱11.0
--	-------	-------	-------

III. Development of the Project:

A. How will the project be developed:

The project will be developed through the Provincial Development Assistance Project (PDAP) and the Department of Local Government and Community Development (DLGCD) working in close cooperation with the respective participating provinces and barangays. Both PDAP and DLGCD are well established, on-going organizations. Furthermore, they have demonstrated both the institutional capacity and the procedural means to execute relatively sophisticated infrastructure projects. It is anticipated that a minor addition of personnel will be required by PDAP at the national level. The participating provinces will also be required to increase their technical support capacity in order to assist with feasibility studies, provide project design, and perform equipment maintenance.

The individual projects to be undertaken at the community level will emanate from the provincial waterworks inventories, feasibility studies, and the provincial waterworks development plans. The latter will be an integral part of the overall provincial comprehensive development plan and the preparation of such documents will be the responsibility of the various provincial development staffs working in coordination with the appropriate collateral agencies at

the provincial level. Projects that are identified, deemed technically sound, economically feasible, acceptable to the provincial Sangguniang Panlalawigan and meet the criteria outlined by DLGCD and PDAP will be eligible for funding. Among other requirements, an important pre-requisite to certification for funding projects will be to conduct a comprehensive survey of all existing and proposed waterworks systems in the province. The surveys will be limited to small systems and will address such matters as a) area to be covered, b) number of families served, c) source of water, d) type of distribution, and e) estimated construction, operation, and maintenance costs.

The financial scheme utilized will be the fixed cost, reimbursable concept and the procedures for project implementation (with adaptations) will be those currently employed in the Special Infrastructure and Rural Roads Program.

It is planned to initiate the project on a limited basis in the more experienced PDAP provinces and extended it to the remaining PDAP provinces as they become certified for participation and as experience is gained in the implementation of the project itself.

At the community (barangay) level, the project will be implemented through water consumers cooperatives. These cooperatives will be consumer-owned, non-profit organizations. Their costs and expenses will be covered by charges and assessments against their members. These groups will have the responsibility for the maintenance, operation and management of the water systems once the construction is completed.

Participating barangays will be required to deposit an amount of money equal to the maintenance and operation costs for the first year of operations prior to being certified for participation in the program. In addition to initial assessments, project beneficiaries will also pay user-fees for services rendered in order that sufficient operational capital will be assured in advance for each succeeding year of operation.

Training will be an essential element of the project. It will be offered on an on-going basis through PDAP, DLGCD, and USAID for both the participating provinces and the barangay cooperative associations.

B. What is the schedule to submit the PRP and PP?

1. The PRP will be submitted in August 1976.
2. The PP will be submitted in the last quarter of FY 77.

C. What is the best estimate of AID resources necessary to prepare the PRP and PP?

1. A team of program specialists will be required from AID/Washington for both the preparation of the PRP and the later development of the PP.
2. The Mission will also require advice during the development periods of the PRP and the PP. Additional assistance will be required in the initial stages of the project's implementation.

The services required would be provided by AID/Washington or a qualified consultant in water management and operations.

Two TDY technicians will be needed for a period of three weeks during the preparation of the PRP. One technician will be required for three weeks during the interim necessary to move from the PRP to the PP.

One should have a combined knowledge of finance, training, cooperatives and the regulatory aspects applicable to those areas. The other technician would be a civil engineer and have knowledge of water utilities management and environmental sanitation.

Issues of a Policy or Programmatic Nature:

No broad issues have been identified which require AID/Washington's consideration during this PID review. This project is fully consistent with the goal of strengthening Local Government capability of delivering basic services.

Life of Project: 3 Years
 From FY 78 To FY 80
 Total U.S. Funding: \$2,184,000.00
 Date Prepared: August 25, 1978

Project title & Number: BARANGAY WATER PROJECT

NARRATIVE SUMMARY		OBJECTIVELY VERIFIABLE INDICATORS		MEANS OF VERIFICATION		IMPORTANT ASSUMPTIONS																																																									
(A-1)		(A-2)		(A-3)		(A-4)																																																									
<p>General objective to which this project contributes:</p> <p>To improve the general health of the people served in the Barangay Water Area.</p>		<p>Measure of Goal Achievement:</p> <p>Within 3 years of barangay water system installation there will be:</p> <ol style="list-style-type: none"> 1. No cholera or typhoid outbreak directly traceable to project water supply 2. A 50% decrease in infant morbidity and mortality caused by gastroenteritis and 3. A decrease in reported skin disease cases (scrap and eczema) of at least 50% 		<p>By review of one evaluation system in each participating province</p>		<p>Assumptions for achieving Goal Targets:</p> <ol style="list-style-type: none"> 1. An adequate supply of safe water is the major requirement for control and elimination of water-borne diseases. 2. The results from the evaluation projects will be typical of all systems. 																																																									
<p>Project Purpose:</p> <p>To provide safe, reliable, low-cost water to deprived residents of selected small rural communities (under 5,000 population).</p>		<p>Conditions that will indicate purpose has been achieved. End-of-Project Status:</p> <ol style="list-style-type: none"> 1. All installed system will be collecting sufficient fees to assure continuing operations. 2. The delivered cost of water does not exceed 3% of the average family income. 3. Regular quality testing is being performed on each system. 4. At least 50% of the residents are using the installed system as their primary source of potable water. 		<p>Province reports, field inspections, household surveys.</p>		<p>Assumptions for achieving Purpose:</p> <p>Construction of Barangay Water Systems will continue to be a high priority of participating provinces.</p>																																																									
<p>Project Outputs: Stage II</p> <p>To establish the capability of selected local governments to identify, plan, organize and install functional barangay cooperative water systems with an indigenous maintenance capacity.</p>		<p>Magnitude of Outputs: Stage II</p> <ol style="list-style-type: none"> a. Existence of a Provincial/City Development Staff that can identify potential barangay water systems and organize cooperatives to support and manage same. b. Existence of a Provincial/City Engineering Office that is capable of designing and installing barangay water systems plus technical assistance for maintenance of same 		<p>Stage II</p> <ol style="list-style-type: none"> a. Evaluation b. Reports, surveys, inventories c. Field inspections d. Physical counts and actual measurements e. Periodic audits 		<p>Assumptions for achieving Outputs: Stage II</p> <p>The authority and control over planning and implementing subprojects will be retained by local government units.</p>																																																									
<p>Project Outputs: Stage I</p> <p>Trained DLCCO Project Management Staff Personnel Executed participating province agreements Trained provincial staff personnel Completed Provincial Water Resources Development Plans Target barangays selected Barangay Water Associations established and trained Water systems constructed</p>		<p>Magnitude of Outputs: Stage I</p> <table border="1"> <thead> <tr> <th>(Cumulative)</th> <th>FY 78</th> <th>FY 79</th> <th>FY 80</th> </tr> </thead> <tbody> <tr><td>1.</td><td>5</td><td>3</td><td>5</td></tr> <tr><td>2.</td><td>15</td><td>30</td><td>25</td></tr> <tr><td>3.</td><td>180</td><td>250</td><td>300</td></tr> <tr><td>4.</td><td>15</td><td>20</td><td>25</td></tr> <tr><td>5.</td><td>150</td><td>350</td><td>480</td></tr> <tr><td>6.</td><td>150</td><td>350</td><td>480</td></tr> <tr><td>7.</td><td>60-120</td><td>150-320</td><td>250-480</td></tr> </tbody> </table>		(Cumulative)	FY 78	FY 79	FY 80	1.	5	3	5	2.	15	30	25	3.	180	250	300	4.	15	20	25	5.	150	350	480	6.	150	350	480	7.	60-120	150-320	250-480	<p>Stage I</p> <ol style="list-style-type: none"> 1. DLCCO reports 2. Field observations 3. Certified reimbursements for completed projects 4. USAID & COP audit/inspections 		<p>Assumptions for achieving Outputs: Stage I</p> <p>The number of potentially feasible projects to be identified at the barangay level will exceed the actual number of projects to be executed through this project.</p>																									
(Cumulative)	FY 78	FY 79	FY 80																																																												
1.	5	3	5																																																												
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7.	60-120	150-320	250-480																																																												
<p>Project Inputs:</p> <p>USAID:</p> <ol style="list-style-type: none"> a. \$3 million dollar loan (SLC) b. Technical assistance / <p>GOP:</p> <ol style="list-style-type: none"> a. Training funds b. Technical assistance (x 4.5) c. Loan reimbursements for direct construction costs d. Project Management Staff salaries and support <p>Local Government:</p> <ol style="list-style-type: none"> a. Planning, training and engineering staff, salaries and allowances b. Overhead contribution costs <p>Barangay Water Cooperatives and Associations</p> <p>* Technical assistance to be funded under personal service contract</p>		<p>Implementation Target: (Type and Quantity)</p> <table border="1"> <thead> <tr> <th></th> <th>FY 78</th> <th>FY 79</th> <th>FY 80</th> </tr> </thead> <tbody> <tr><td>1.</td><td></td><td></td><td></td></tr> <tr><td>a.</td><td>3,000</td><td>-</td><td>-</td></tr> <tr><td>b.</td><td>75</td><td>75</td><td>-</td></tr> <tr><td>2.</td><td></td><td></td><td></td></tr> <tr><td>a.</td><td>137</td><td>125</td><td>125</td></tr> <tr><td>b.</td><td>30</td><td>102</td><td>150</td></tr> <tr><td>c.</td><td>100*</td><td>1,020*</td><td>1,500*</td></tr> <tr><td>d.</td><td>4</td><td>0</td><td>0</td></tr> <tr><td>3.</td><td></td><td></td><td></td></tr> <tr><td>a.</td><td>75</td><td>150</td><td>180</td></tr> <tr><td>b.</td><td>62</td><td>162</td><td>200</td></tr> <tr><td>c.</td><td>22</td><td>22</td><td>22</td></tr> <tr><td>d.</td><td></td><td></td><td></td></tr> </tbody> </table> <p>*Forward project cost as reimbursed thru CIP arrangement (\$23,800,000 from GOP sources)</p> <p>*Does not include operational or maintenance costs or other inputs of barangay water associations which will be determined according to administrative procedures</p>			FY 78	FY 79	FY 80	1.				a.	3,000	-	-	b.	75	75	-	2.				a.	137	125	125	b.	30	102	150	c.	100*	1,020*	1,500*	d.	4	0	0	3.				a.	75	150	180	b.	62	162	200	c.	22	22	22	d.				<p>(D-3)</p> <ol style="list-style-type: none"> 1. Periodic Progress Reports 2. Field observations 		<p>Assumptions for providing inputs:</p> <p>Funds available for development projects will be maintained at no less than present levels.</p>	
	FY 78	FY 79	FY 80																																																												
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INITIAL ENVIRONMENTAL EXAMINATION

Project Location: Republic of the Philippines

Project Title : BARANGAY WATER PROJECT

Funding (Fiscal Year and Amount):

FY 78 Loan - \$3,000,000
FY 78 Grant - \$ 98,700
FY 79 Grant - \$ 85,000

Life of Project: Three years following the signing of the Loan Agreement.

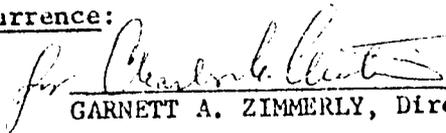
IEE Prepared by: CHARLES C. BRADY, Project Manager

Date : September 15, 1976

Environmental Action Recommended: Negative Determination

Concurrence:

Date:


GARNETT A. ZIMMERLY, Director

9/20/76

Assistant Administrator's Decision:

Approval of Environmental Action Recommended

Disapproval of Environmental Action Recommended

Contents of Initial Environmental Examination

I. Examination of Nature, Scope, and Magnitude of Environmental Impacts

A. Description of Project

BARANGAY WATER PROJECT

1. Goal

To improve the general health of the residents serviced in the Barangay Water System area.

2. Purpose

To establish the capability of selected local governments to identify, plan, organize and install functional barangay cooperative water systems with an indigenous maintenance capacity to provide safe, reliable, low-cost water to residents of selected, small rural communities, (under 5,000 population).

3. Background

An adequate supply of safe water is the major requirement for control and elimination of water borne diseases. In the Philippines, over 50% of the rural households are using water from unimproved shallow wells. Many families must obtain water for drinking, bathing, and laundry purposes from other contaminated sources. The scarcity of safe water poses serious problems and is the main reason for the high incidence of water borne diseases. The World Health Organization (WHO) has shown that most of the diseases killing children under 5 years of age can be linked directly to contaminated water. Medical doctors interviewed and DOH records examined during the documentation of the Project indicated that more than 80% of the illnesses treated in hospital and health centers are directly traceable to water borne parasites and diseases such as typhoid, cholera and bacillary dysentery. Diseases of this sort result in inordinate expenses to both the GOP and private citizens for medical services. There is also a hidden loss in productivity to the country's development. The proposed Barangay Water Project will attempt to increase the supply of safe water present at the barangay or rural village level by designing, installing, and developing the indigenous capacity for maintaining appropriate water systems in small communities. (Under 5,000 residents.) The implementing agency for this project of the national level will be the Department of Local Government and Community Development (DLGCD). Water systems sub-projects will actually be constructed with local government funds in accordance with locally developed plans, feasibility studies, and engineering capabilities. The Department of Local Government and Community Development (DLGCD) will then provide a Fixed Amount Reimbursement (FAR) to the 25 participating provinces during the three year span of the project's life. The United States Agency for International Development (USAID) will reimburse the GOP for a portion of local currency costs of water system sub-projects constructed through a Special Letter of Credit (SLC).

4. Major Outputs

The Barangay Water Project will concentrate on training and construction as the two major components of the project. Membership in the project will generally be limited to the 28 participating Provincial Development Assistance Project (PDAP) provinces as planning and implementing capability have been demonstrated to be higher in those provinces than in other provinces. Such provinces are also more experienced in working with the Fixed Amount Reimbursement (FAR) mechanism.

After training of the Department of Local Government and Community Development's (DLGCD) Project Management Staff and after the loan agreement has been finalized, sub-agreements will be executed between the Department of Local Government and Community Development (DLGCD) and the participating provinces. Participating provinces will number 15 in FY 78, 20 in FY 79, and 25 in FY 80. These sub-agreements will precede the training of 315 people, connected with provincial engineering and provincial development planning staffs and other local offices, vital to the project's success. Provincial Water Resource Development Plans will be completed by each province and target barangays will be selected. Training of the Barangay Water Association as general membership and management staffs will be jointly undertaken by Department of Local Government and Community Development (DLGCD) and the provincial government. When training is completed and the provinces' Annual Implementation Plans (AIPs) are approved, construction of water system sub-projects will be authorized on a Fixed Amount Reimbursable (FAR) basis.

Over the three-year period of Project's implementation up to 480 water associations (having around 250 members each) are expected to be trained in the methodology and techniques of managing and operating their water systems. Successful completion of up to 480 such water systems and the institutionalization of the local government capacity to replicate other similar systems will make possible follow-on funding by USAID or other donor agencies for expansion of the Project within the original provinces or for extension to other provinces not included in the initial Project.

B. Identification and Evaluation of Environmental Impacts

1. General

The proposed Barangay Water Project aims at the provision of safe drinking water to scores of small, remote villages in the rural areas of the Philippines.

An analysis of the action to be taken during the course of implementing the project reveals no significant major disturbance or pollution to the air, water, vegetation terrain or other natural resources. This conclusion is based upon previous Mission experience with the development of potable water projects financed with loan funds for improving water systems in larger urban areas. More recently, a \$20,000,000 loan was authorized for the development of a high impact program for improvement of water systems in medium sized urban areas. Systems under these two represent larger capital outlays, involve more complex construction, and generate greater environmental impact than the relatively minor sub-projects visualized under the proposed Barangay Water Project.

No water impoundments are visualized that would seriously alter the natural flow of water or the downstream movement of water borne nutrients; no equipment will be utilized that will significantly increase noise levels in the community; and no harmful chemicals will be introduced to the environment.

To the contrary, the Barangay Water Project is designed in such a way as to make the general environment in which sub-projects are executed a safer, healthier, and more desirable place to live. In this respect, polluted matter (contaminated water) already in the environment will be replaced by safe water for human and other animal consumption. Additionally, it is planned to promote other programs such as reforestation, watershed development and protection, and educational programs emphasizing improved environmental sanitation as an adjunct to the contemplated water project.

A question has arisen with regard to the procedures for handling defunct and abandoned well perforations. Administrative procedures will be developed which stress the local government and community responsibilities vis-a-vis such wells. In effect, the policy will be to require filling, capping, sealing or otherwise covering all such abandoned wells. No adverse effects are anticipated in connection with abandoned wells but due caution will be exercised nevertheless.

The experience of the USAID Engineering Staff indicates that the increased water usage resulting from the installation of the barangay water systems will not adversely affect the underground water supply or underground water level. In general, the Philippines is a high rainfall area with abundant water level recharge potential.

Discussion of Impacts

Certainly the detrimental effects, while there will be some, would be of no greater impact than those experienced by runoff after the peak of a normal tropical rainstorm, so common in the Philippines.

B. WATER QUALITY

The only impact foreseen with relation to water quality is favorable.

C. ATMOSPHERIC

- 1) No environmental impact.
- 2) No environmental impact.
- 3) Noise pollution:

During the construction period, noise associated with medium size or heavy equipment (bulldozers, well drilling rigs, concrete mixers, rollers, etc.) and traffic will occur at, or near, the various construction sites. This will be a temporary disturbance and will have only minor and short term impact.

Later, in the operational phase, wells with electric motors will be moderately noisy. Such equipment, as a measure of upkeep as well as a means to reduce noise pollution, will be housed within concrete or block structures so that noise transmitted is minimal. Clearly no noise that would impair hearing or induce negative body or psychological disorders will be created.

- 4) Other Factors: Aesthetics:

Storage, pumping, and other supporting facilities and equipment will be relatively inconspicuous and will have no adverse effect on the existing environment. To minimize the adverse effect on existing environment, the design of physical facilities will be unobtrusive and in harmony with the surrounding landscape.

D. NATURAL RESOURCES

- 1) Diversion altered use of water:

The impoundment of water will occur in connection with some of the proposed sub-projects. This is particularly true of spring, river, and stream development sub-projects.

The construction of water supply impoundments will have both positive and negative impacts on the environment. A review of these impacts, however, reveals a resulting net environmental benefit.

Discussion of Impacts

Again, it is noted that the sub-projects to be realized are of such a small size that impoundments will not produce significant detrimental impacts to the general ecology.

Impoundments of water with their attendant and beautified waterscapes will provide cleaner, safer, more reliable, and more economical drinking water to the small, benefiting communities.

The normal negative impacts of water impoundments:
a) loss of water due to increase evaporation, b) change in habitat for wildlife and fauna, c) trapping nutrients otherwise allowed to flow downstream, and d) relocation of people will all be negligible due to the nature and reduced size of the sub-projects which are planned.

With careful consideration during the planning and final design stages, negative impacts can be largely eliminated in sub-projects of the size anticipated.

- 2) No environmental impact
- 3) Other factors - Waste Water:

In the Philippines, only two cities, Manila and Zamboanga, have some form of wastewater disposal system. Both systems are old, antiquated, and designed to serve fewer people than now reside in those locations. Practically all other wastewater is disposed of through open ditches, gutters, and canals. Yet, there is no evidence of intolerable or unacceptable public health conditions as a result.

The presence of water systems and the greater availability of water which is proposed will in fact increase the amount of wastewater in the benefiting community. Such increased volumes of water will be disposed of through the same means as that being used throughout the rest of the Philippines, e.g., septic tanks, surface drains, gutters, and ditches. Generally speaking, the surplus of water resulting in waste from such small systems will be readily absorbed and become ground water or will be lost by evaporation. In either circumstance, it will returned to the normal water cycle. Thus, no particular burden is expected, and no particular system for the disposal of wastewater is contemplated.

In certain areas, especially in areas where people congregate at public hydrants to gather water, wash clothes, or bathe, unsightly or undesirable accumulations of wastewater may occur. To counter this expected problems, communities will be encouraged, to weigh the costs and benefits of installing enlarged aprons with simple drainage canals, and both public clothes washing, and public shower stall facilities.

Discussion of Impacts

E. CULTURAL

The subtle and pervasive impacts on the communities by the proposed systems is not fully known. In order to gain a better understanding of such aspects of the Project, a social anthropologist has been requested to assist in the preparation of an in depth social soundness analysis. Such a technician has already been identified by Washington and his arrival in the Philippines pends GOP clearance.

It can be stated categorically that no alteration or destruction of important physical symbols of culture will be permitted and that nothing will be introduced to a community that would adulterate, dilute, or have a dispersing effect on the indigenous culture.

F. SOCIO-ECONOMIC

Infrastructure projects, including water, offer a strong stimuli to economic growth and development.

Discussion of socio-economic effects of this Project is included in the text of the Project Review Paper (PRP). Generally the anticipated effects, although moderate, will be positive.

The worldwide experience with water shows that "having it" creates new job opportunities, increased employment, and greater village income. A similar phenomenon would be expected in the Philippines.

4. Other Factors: Migration

In the Philippines, migration from rural to urban areas is inescapable. Rural migrants seeking new economic opportunities usually have two distinct choices of destination: the Metropolitan Manila and other urban areas. Being the most favored migration point, Metropolitan Manila, however, has reached a level when present government policies inclined towards migration restraint. In the meanwhile, other urban areas of high growth potential await further development.

Metropolitan Manila is troubled with "people" congestion, "traffic" congestion, lack of housing, environmental problems (water and air pollution), unemployment, slums, poor quality of life. For these and other reasons, a plan for the development of 15 Rural Service Centers (intermediate cities) in selected areas is also being proposed by the Mission. The idea is to increase the quality of life for the rural poor by making the delivery of goods, services, and technology more efficient. This can be done by strengthening the transmission links, the "service centers", which form an integral part of the functional or larger community in which such small rural communities exist. It is also expected

Discussion of Impacts

that such "rural service centers" would provide a "halfway house" in stemming direct migration from the farm to Metro Manila and other larger metropolitan areas. In this context, the Barangay Water Project would have a re-enforcing effect on the Rural Service Center Project (RSC) where infrastructure investments in such projects as public housing, roads, communication facilities, and markets become more beneficial when an adequate water supply accompanies them.

Therefore, the provision of water supply projects, in selected "rural service centers" will further the current policy of discouraging migration to Metro Manila while enhancing, in a meaningful way, economic opportunities and the general quality of life in rural, and rural service communities.

G. HEALTH

The Barangay Water Project will have a high impact on health. effect will be beneficial.

The establishment of a water supply system in a community will necessarily bring about health benefits to the population. Undeniably, the provision of safe, potable water to the population is a pre-requisite for the maintenance of minimum health standards. These health benefits are ordinarily manifested in the following:

1. A significant reduction in the incidence of water borne diseases such as choera, dysentery, gastro-enteritis, and typhoid/parathyphoid. As a result, there will be a decrease in the amount of time lost by income earners who are afflicted with such diseases.
2. A subsequent reduction in premature deaths due to the lower incidence of water borne diseases.
3. A corresponding reduction in medical expenses due to lower incidence of water borne diseases.

C. ATMOSPHERIC

- 1. Air additives ----- N
- 2. Air pollution ----- N
- 3. Noise pollution ----- L
- 4. Other factors
- _____ X
- _____

D. NATURAL RESOURCES

- 1. Diversion, altered use of water ----- L
- 2. Irreversible, inefficient commitments --- N
- 3. Other factors
- _____ X
- _____

E. CULTURAL

- 1. Altering physical symbols ----- N
- 2. Dilution of cultural traditions ----- L
- 3. Other factors
- _____ X
- _____

F. SOCIO-ECONOMIC

- 1. Changes in economic/employment patterns -- M (f) positive
- 2. Changes in population ----- M (f) positive
- 3. Changes in cultural patterns ----- U
- 4. Other factors
- _____
- _____

G. HEALTH

- | | |
|---|----------------------|
| 1. Changing a natural environment ----- | <u>H(+) positive</u> |
| 2. Eliminating an ecosystem element ----- | <u>N</u> |
| 3. Other factors | |
| _____ | <u>X</u> |
| _____ | |

H. GENERAL

- | | |
|---------------------------------|----------|
| 1. International impacts ----- | <u>N</u> |
| 2. Controversial impacts ----- | <u>N</u> |
| 3. Larger program impacts ----- | <u>N</u> |
| 4. Other factors | |
| _____ | <u>X</u> |
| _____ | |

I. OTHER POSSIBLE IMPACTS (not listed above)

- | | |
|-------|----------|
| _____ | <u>X</u> |
| _____ | <u>X</u> |
| _____ | |

See attached "Discussion of Impacts".

III. DISCUSSION OF IMPACTS - IMPACT AREAS AND SUB-AREAS

A. LAND USE

1) Changing the character of the land through

a) No environmental impact.

b) No environmental impact.

c) Land Clearing:

There will be a moderate, short term but minor disturbance to the top soil in limited areas for restricted periods of time during the construction phase of some of the proposed sub-projects.

Minor soils disturbances can be expected at the construction sites of given, (not all), sub-projects as land is moved in the creation of water impoundment structures and astride the routes of distribution and transmission lines at the point of well drilling, and in the areas where footings for concrete storage structures and well aprons are built.

In the removal of the top soil for construction, there is always some erosive effects due to either runoff by rain water or soil lost to dust caused by prevailing or temporary gusting winds. This Project is not atypical in that respect.

Not all sub-projects will necessitate the removal of top soil but many will. Even those that do, however, will be of a small enough construction outlay and the duration of construction for such sub-projects will be of a sufficiently short period to preclude significant major negative ecological impacts.

Where it is necessary, permanent physical controls will be installed as quickly as possible in construction areas. These would include sodded diversion terraces, sod on steep cut or fill banks, and reforestation practices.

Dust problems during construction can be minimized by routine sprinkling of the construction area and by returning the excavated area to its original state as soon as possible.

It is also conceivable that faulty transmission lines could permit the escape of water in sufficient quantities and under enough pressure to precipitated erosion. This can be avoided by proper maintenance and water utilization controls.

It should be pointed out that while recognition is made of potential problems related to soil erosion, none are expected to occur as the sub-projects are generally small and the control procedures and practices will be sufficient to preclude such problems.

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IV. OTHER IMPACTS: (a "with and "without" comparison of the Project)

The water supply project will generate other benefits as shown in the following table. This table indicates the implications of having, (with), or not having, (without), the Project.

<u>Hypothesis</u>	<u>"Without" Project</u>	<u>"With" Project</u>
1. Water Adequacy	will continue to be in short supply; services will be intermittent and unreliable.	supply will be adequate and have continuous pressure.
2. Water Quality	will continue to provide unsafe water and waterborne diseases, and will continuously be a menace to health.	supply will be safe, wholesome, and healthful.
3. Personal Hygiene of Served Population	because of current water shortage, personal cleanliness is expected to range from marginal to minimal.	will enhance personal hygiene and the overall appearance and cleanliness of the population
4. Personal Convenience	will be minimal; significant time will be spent in carrying water.	permits time for other productive activities, provides "modernization" benefits; enhances self-reliance.
5. Employment Benefits	no improvement	will provide short and long-term employment benefits.
6. Water-Using Industries in Area	no inducement to the promotion of small, cottage industries which use water as a primary or secondary input.	water-using small industries will be able to expand facilities and activities.
7. Local Tourism	non-availability of piped potable water and poor sanitation facilities will be a deterrent to local tourism.	availability of water will help promote modest, local tourism.

V. SUMMARY

The probable unfavorable environmental effects are summarized below:

SUMMARY TABLE

<u>Item</u>	<u>Term</u>	<u>Negative</u>	<u>Solution</u>
Soil Erosion	Short	Slight	Strict compliance with construction specifications
Dust	Short	Slight	Strict compliance with construction specifications
Noise-Construction	Short	Slight	Strict compliance with construction specifications
Noise-Operational	Long	Slight	Proper design and implementation
Aesthetics	Long	Slight	Proper design and implementation
Increase in Waste-water	Long	Unavoidable	Proper design and implementation
Impoundment	Long	Slight	Careful design
Resource Use	Long/Short	Unavoidable	Feasibility studies

1. Careful design and construction will minimize the noted, slight, and generally temporary environmental disturbances discussed above. They will also create aesthetic, culturally pleasing, and more healthful conditions under which man develops his most desirable potentialities.
2. The recommended plan will enhance public health, improve the quality of life in the community, and guide its long-term growth and productivity.
3. The commitment of resources is small compared with the anticipated benefits. Resource use is necessary in the construction and operation of a water supply system, but the overall sum of the benefits shows overwhelming advantages to be gained by carrying on with the Project.

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Attachment No. 3

VI. RECOMMENDATION FOR ENVIRONMENTAL ACTION

A. Recommendation for Threshold Decision

This Project will have no significant major detrimental effect on the environment; therefore, a "Negative Determination" is appropriate.

This recommendation is based upon the discussion of impacts in this IEE and an in depth environmental impact analysis conducted for a similar but larger water systems program being AID financed with development loan funds. The findings of the referenced study was that there were no significant major actions affecting the environment.

APPENDICES

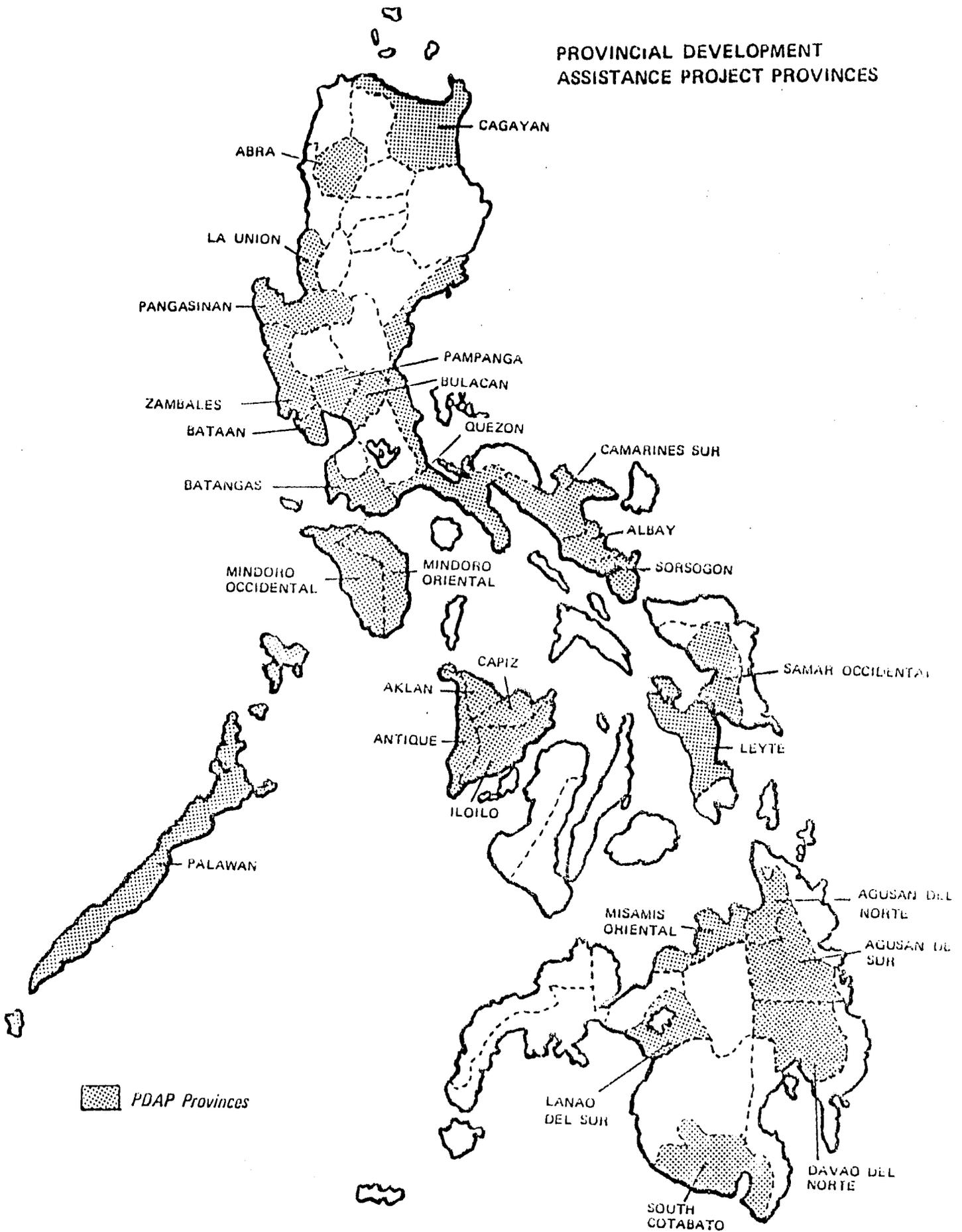
LISTING OF PROVINCES

APPENDIX 1

PROSPECTIVE PROVINCE LISTING
BARANGAY WATER (SYSTEMS) PROJECT
AND IDENTIFICATION CODE NUMBERS

<u>I.D. CODE No.</u>	<u>Province</u>
02	Cagayan
04	Abra
08	La Union
13	Pangasinan
15	Quezon
16	Zambales
18	Bataan
19	Pampanga
20	Bulacan
24	Batangas
26	Camarines Sur
28	Mindoro Occidental
29	Mindoro Oriental
31	Albay
32	Sorsogon
36	Samar
38	Aklan
39	Capiz
40	Antique
41	Iloilo
44	Leyte
52	Misamis Oriental
53	Agusan del Norte
54	Agusan del Sur
58	Lanao del Sur
61	South Cotabato
63	Davao (Norte)
66	Palawan

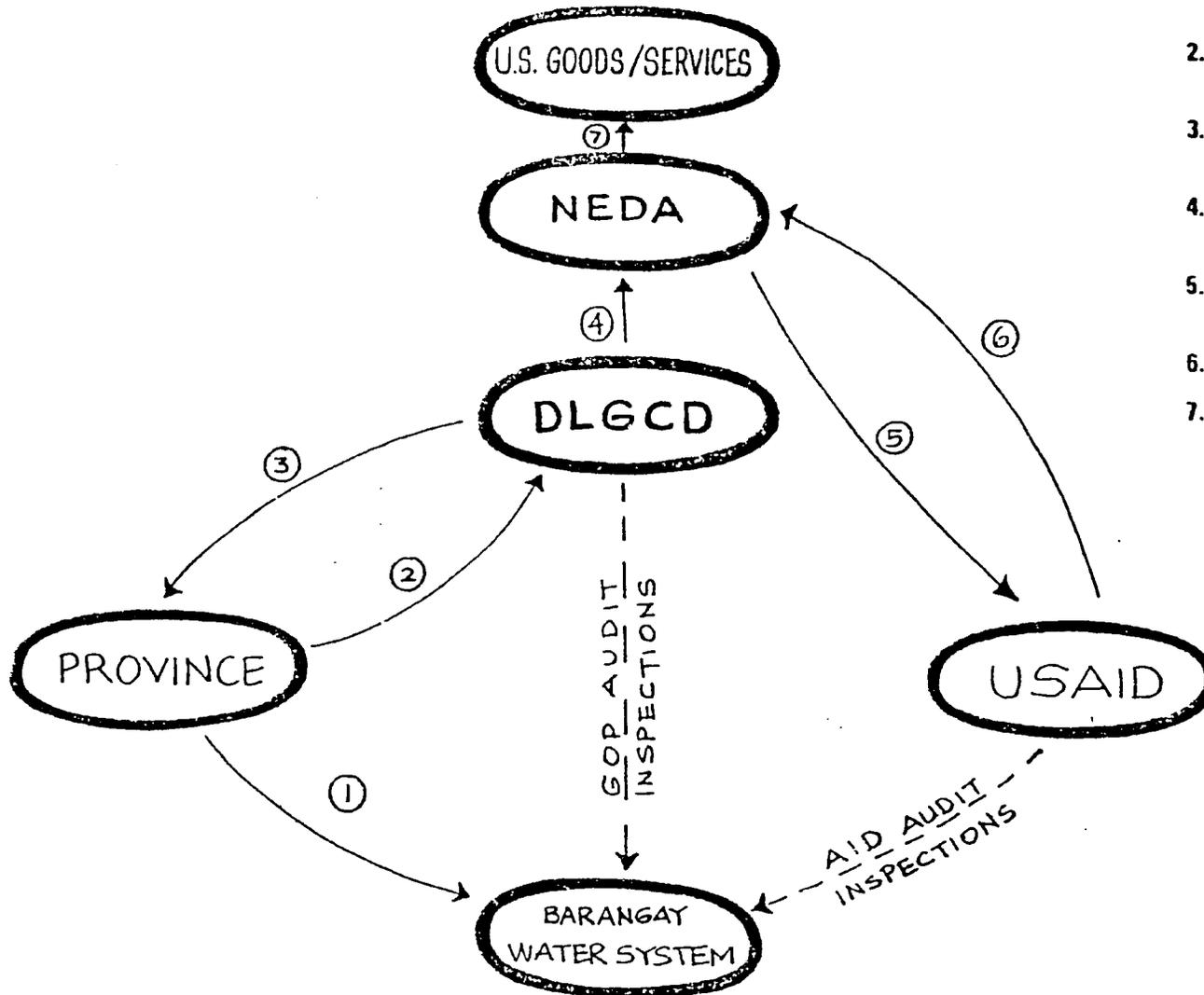
PROVINCIAL DEVELOPMENT ASSISTANCE PROJECT PROVINCES



PROJECT FLOW DIAGRAM

**OVAl DIAGRAM EXPLAINING
REIMBURSEMENT SCHEME**

BARANGAY WATER SYSTEMS PROJECT
(Oval Diagram)
FIXED AMOUNT REIMBURSEMENT AND SPECIAL LINE OF CREDIT
ARRANGEMENT



K E Y

1. Province constructs system with funds and absorbs overhead costs.
2. Province requests reimbursement from DLGCD after inspection.
3. DLGCD makes reimbursement to Province within 30-60 days.
4. DLGCD notifies NEDA of reimbursement (info USAID).
5. NEDA requests SLC "draw-down" on a quarterly basis.
6. USAID approves credit.
7. GOP makes U.S. purchase.

• FAR for direct construction:

1. Labor
2. POL
3. Material

Country: Philippines

LOAN ACTIVITY DATA

FOR USAID

Title	Funds	Health	Proposed Obligation (\$000)
Barangay Water Project	Kind of Loan	Project	3,162
			Initial Obligation
			FY 79

Goal: To improve the general health of the residents serviced in the Barangay Water System area.

Purpose: To establish the capability of selected local governments to identify, plan, organize and install functional barangay cooperative water systems with an indigenous maintenance capacity to provide safe, reliable, low-cost water to residents of selected small rural communities, (under 5,000 population).

Background: An adequate supply of safe water is the major requirement for control and elimination of water borne diseases. In the Philippines, over 50% of the rural households are using water from unimproved shallow wells. Many families must obtain water for drinking, bathing and laundry purposes from other contaminated sources. The scarcity of safe water poses serious problems and is the main reason for the high incidence of water borne diseases. The World Health Organization (WHO) has shown that most of the diseases killing children under 5 years of age can be linked directly to contaminated water. Medical doctors interviewed and DOH records examined during the documentation of this project indicated that more than 80% of the illnesses treated in hospital and health centers are directly traceable to water borne parasites and diseases such as typhoid, cholera and bacillary dysentery. Diseases of this sort result in inordinate expenses to both the GOP and private citizens for medical services. There is also a hidden loss of productivity to the country's general development.

Major Outputs: The Barangay Water project will concentrate on training, construction and the organization of local water associations as the major components of the Project. The project will generally be limited to the 18 participating Provincial Development Assistance Project (PDAP) provinces where a strong planning and implementing capability exists.

Participating provinces will number 15 in FY 78, 20 in FY 79 and 25 in FY 80. Approximately 315 people connected with provincial engineering, provincial development planning staffs, and other offices vital to the project's success will be trained. Provincial Water Resource Development Plans will be prepared. And, Barangay Water Associations will be organized and trained.

Over the three year life of the project, up to 480 water associations are expected to be organized and trained in the methodology and techniques of managing and operating their own self-sustaining water systems.

Construction of water system subprojects will be authorized on a fixed amount reimbursable (FAR) basis. Up to 480 systems will be constructed.

A. I. D. Financed Inputs (in \$000)

	FY 78	FY 79	FY 80
Dollar Loan (SLC)	3,000	-	-
Technical Assistance	54*	54*	54*

*Under Personal Service Contract