ISN-34010 PD-AAP-085 6120207/15

CLASSIFICATION

PROJECT EVALUATION SUMMARY (PES) — PART I

Report Control Symbol U-447

1. PROJECT TITLE	2. PROJECT NUMBER	3. MISSION/AID/W OFFICE
SELF-HELP RURAL WATER SUPPLY	612-0207	USAID/MALAWI 3106

4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) 149

☒ REGULAR EVALUATION ☐ SPECIAL EVALUATION

5. KEY PROJECT IMPLEMENTATION DATES	6. ESTIMATED PROJECT FUNDING	7. PERIOD COVERED BY EVALUATION
A. First PRO-AG or Equivalent FY____ B. Final Obligation Expected FY____ C. Final Input Delivery FY 85	A. Total $8,000,000 B. U.S. $6,000,000	From (month/yr.) August 1980 To (month/yr.) August 1983 Date of Evaluation Review August 1983

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

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airgram, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
1. USAID, DLVW and Treasury should hold regular meetings to discuss invoicing and payment issues	USAID, DLVW & Treasury	November 1983
2. Obtain new quotations from pipe suppliers for the remaining pipes and fittings to be purchased for the project	DLVW	November 1983
3. Provide each HESP field worker with a bicycle he can ultimately purchase.	DLVW	January 1984
4. Strengthen the HESP component by providing additional USAID funds for training	USAID, DLVW and Health	December 1983
5. Establish a protocol for pre-testing all new visual aids.	DLVW	December 1983
6. Continue the HESP programs as planned	USAID & Health	January 1984
7. Continue to revive village tap committees which have become inactive.	DLVW	November 1983
8. Select some village tap committee members to be included in village health committee training.	DLVW & Health	January 1984
9. Establish a program of water quality monitoring of the USAID-financed projects.	DLVW	January 1984

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

- [x] Project Paper
- [ ] Financial Plan
- [ ] Logical Framework
- [ ] Project Agreement
- [ ] Implementation Plan e.g., CPI Network
- [ ] PIO/T
- [ ] PIO/C
- [ ] PIO/P
- [ ] Other (Specify) _____
- [ ] Other (Specify) _____

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

A. [ ] Continue Project Without Change
B. [ ] Change Project Design and/or [ ] Change Implementation Plan
C. [ ] Discontinue Project

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

Dr Dennis B Warner, WASH Project Director, Team Leader
Dr Raymond B Isely, WASH Associate Director
Mr Craig Hafnar, WASH Senior Project Officer
Dr John Briscoe, University of North Carolina, Economist

12. Mission/AID/W Office Director Approval

Signature

Typed Name: Sheldon W Cole

Date: February 9, 1984

AID 1330-15 (3-78)

10. Encourage joing training activities between the field staff of the DLVW and the MOH and between the members of the village health and tap committees.	DLVW & Health	December 1983
11. Establish training-of-trainers workshops within the Department of Lands, Valuation and Water.	DLVW	January 1984
12. Expand information activities in the DLVW in the areas of system metering, water quality monitoring, and the sharing of data with the MOH.	DLVW	December 1983.
13. Closely monitor the operational performance of slow sand filters at the Dombole and Mwanza Schemes, as is planned by the DLVW.	DLVW	December 1983
14. Continue on-going research on pipe brakages, intake design, water treatment, and other aspects of water systems that may be appropriate.	DLVW	November 1983
15. Continue to investigate the behacioral changes associated with water and sanitation facilities, such as laundry slabs, water use, etc.	DLVW	November 1983
16. Make greater use of the Center for Social Research in the preparation and conduct of research studies.	DLVW & Health	January 1984
17. Appoint a full-time training director in the MOH	Health	January 1984
18. Provide for simple fiscal and management training of village health committees.	Health	January 1984
19. Gradually phase in the recurrent costs of water systems maintenance by including 10-15 monitoring staff positions in the DLVW revenue account every year.	DLVW	January 1984
20. Investigate methods for community financing of the recurrent costs of water systems	DLVW	November 1983
21 Make greater use of the DLVW Water Laboratory in Lilongwe for water quality monitoring or rural piped water systems.	DLVW	December 1983
22. Reinstate the DLVW rehabilitation/maintenance account as budgeted in 1981 inorder to fund major maintenance activities	DLVW	November 1983
23. Consider encouraging more women to become field health workers.	Health	January 1984.
24. USAID should review its policy towards financing dams and give consideration to funding a dam on the Zomba South Scheme as long as it is technically feasible and cost effective.	USAID & DLVW	January 1984
25. Extend the project termination date as needed to allow completion of all USAID schemes.	USAID & DLVW	January 1984

26.	The Senior Water Chemist of the DLvW should involve the MOH in the development of a program for water quality testing of rural piped water schemes.	DLVW & Health	January 1984
27.	The DLVW should develop procedures for monitoring the reliability of rural piped water systems.	DLVW	March 1984
28.	The DLVW should consider testing some new soakaway designs, such as infiltration trenches and the use of water-loving plants.	DLVW	November 1983
29.	Continue MOH efforts to improve latrine designs, promote latrine construction, and promote safe practices for water transport and storage.	Health	November 1983
30.	Encourage the construction of laundry slabs at each tap in order to promote clothes washing near the tap.	DLVW	December 1983
31.	Maintain current practices involving community support in project construction and maintenance.	DLVW	November 1983
32.	Borehole and shallow well pumps in proximity to taps should be maintained in good repair as alternative sources in case of system breakdown.	DLVW	January 1984
33.	Consider ways to encourage an increase in water consumption overtime	DLVW	January 1984
34.	Obtain water quality and household water consumption data for each scheme.	DLVW	January 1984
35.	MOH field workers should continue collecting sanitation data, such as the presence of latrines, dish drying racks, covered water storege containers, garbage pits and bathrooms.	Health	November 1984
36.	Where adequate data exist, hospital data should be gathered to compare diarrheal condition. (Have the health surveillance assistants collect some primary data on diarrheal morbidity and skin infections on a limited basis.)	Health	January 1984
37.	Review the data contained in the National Nutrition Sample Survey of 1981-82 to determine its potential as a baseline for project evaluation.	Health	January 1984
38.	Review the data on the cholera outbreak of 1974 to determine its relevance to the health impacts of water supply.	Health	January 1984
39.	Assess the effect of the project upon the local manufacture of PVC pipe.	DLVW	January 1984
40.	Measure the time savings resulting from decreased water carrying distances.	DLVW	December 1983

41.	Measure the area, and where possible the economic value of new agricultural lands brought under cultivation as a result of a water scheme.	DLVW and Agriculture	December 1983
42.	Assess the longevity and persistence of committees in the project areas.	DLVW & Health	March 1984
43	Assess the proportion of women members on committees.	DLVW & Health	March 1984
44.	Delete the requirement of the Project Paper and the Grant Agreement for a formal Training and Research Unit within the Rural Water Section of the DLVW.	USAID & DLVW	December 1983
45.	Prepare a comprehensive research and evaluation plan for the final years of the project.	USAID & DLVW	January 1984
46.	De-emphasize the role of ultimate impacts in the end-of-project evaluation and strees instead the assessment of intermediate-level indicators of system performance, water use behaviors, and community support.	USAID & DLVW	January 1984
47.	Strengthen the HESP component in the MOH in order to bring more health education and sanitation elements into the project.	USAID & Health	January 1984
48.	Provide continued support to the Malawi Rural Water piped program as long as the GOM maintains its commitment to the community-based development approach which has been so successful to date.	USAID	November 1983
49.	Reassess project status in early 1984.	USAID	March 1984
50.	Prepare a high level manpower plan for the DLVW.	USAID & DLVW	April 1984
51.	Sponsor study trips of DLVW officials to neighboring African countries.	USAID & DLVW	March 1984

13. SUMMARY

When the Malawi Self-Help Rural Water project was initiated in 1980, USAID provided a grant of $6 million to finance commodity purchases, Malawian field staff salaries, and the incorporation of health education and sanitation elements for a five year effort during which up to 23 rural piped water schemes would be built. Construction activities on the water schemes began in April 1981, and the health component was activated in mid-1982.

Although the Project Paper proposed 23 possible water schemes, subsequent investigation led to a revised list of 16 sub-projects with a design population more than double the original estimate.

At the mid-point of the project, progress towards planned outputs and targets is either on or ahead of schedule. No major deficiencies or problems occurred during the first two years. Under the construction component of the project, the evaluation team concluded that the planners had helped to make a pre-existing, basically sound and highly successful rural piped water program even better. Similarly, under the health component, the evaluators commended the Health Coordinator for developing the HESP section in the short space of one year. It was also noted that most of the Project Paper objectives for this component have been at least partially achieved.

14. EVALUATION METHODOLOGY

A formative mid-term evaluation was called for in the Project Paper, the purpose of which was two-fold:

(1) to measure current progress towards achieving end-of-project status and ultimate project outputs, purpose and goal; and

(2) to establish a baseline of evaluation data for the final evaluation.

Evaluation methodology included site visits in the field, interviews with officials at all levels in the Department of Lands, Valuation and Water and in the Ministry of Health, and review of data and reports developed by the project implementors.

The evaluation was prepared for the USAID Mission to Malawi by the Water and Sanitation for Health (WASH) Project at the request of the AID Office of Health in the Bureau for Science and Technology. The evaluation was performed by a four-person team composed of Dr Dennis B Warner, WASH Project Director, (team leader), Dr Raymond B Isley, WASH Associate Director, (health and community participation specialist), Mr Craig Hafner, WASH Senior Project Officer (Institutional specialist), and Dr John Briscoe, University of North Carolina School of Public Health (economist/sanitary engineer). The evaluation team spent a total of 14 person weeks in Malawi over the period July 16 - August 19, 1983. The cost of the evaluation was about $40,000.

15. EXTERNAL FACTORS

There are two major factors which could have a profound impact on the project goals:

(1) The departure of the Senior Water Engineer from the Rural Water Section. The consequences of this action could interrupt or at least seriously reduce a number of project functions. The Senior Water Engineer, who is the second-in-command of the rural piped water program in Malawi, is responsible for the direction of all training, research, monitoring and evaluation activities of the RWS as well as the design and construction activities in the Southern Region. Because there is no technical officer working directly under the Senior Water Engineer to whom he can hand over his myriad responsibilities, it is feared that at least some of the RWS activities will simply be dropped for lack of expertise to see the job through.

(2) The proposed reorganization of the DLVW. It appears that if a reorganization occurs there will be significant alterations in the administration and operation of the rural piped water programs. The consequences of this could seriously fragment the RWS and cause a dispersal of at least some of its functions to other offices. This, in turn, raises the questions of whether project activities will be able to continue as planned and whether progress can be made towards achieving project objectives.

16. INPUTS

Project funding is provided for three input programs in the overall rural piped water program: construction, maintenance and monitoring, coordination and evaluation.

Construction - the construction of gravity-fed piped water supply scheme is the major activity of this project. The project provides inputs into the construction of intakes, pipelines, tanks, and taps required in such schemes in the form of commodities (PCV pipes are the largest single item), vehicles and equipment, the salaries of "non-established" staff on the construction crews, operating expenses (principally fuel), and tools and equipment.

Actual expenditures on commodity inputs have been higher than foreseen in the Project Paper, while actual expenditures on vehicles, miscellaneous items, and especially, field staff, have been well below the projected levels. Overall progress has been satisfactory and if the present pace is maintained the construction targets will be met by the end of the project.

Maintenance - the aim of the maintenance program is to develop appropriate institutional and engineering solutions to the maintenance and operation problems experienced in gravity-fed rural water schemes. Inputs into this program consist of salaries, office equipment, per diem for training courses, and operating costs.

Research and training expenditures have taken place more or less as predicted, but actual expenditures for staff salaries and, especially, for the purchase of water meters have been considerably less than planned. For the program as a whole, expenditures have run at about 68 percent of the level forseen in the Project Paper.

Monitoring, Coordination and Evaluation - this program has two major objectives - to introduce health education and sanitation activities in the areas served by piped water systems and to provide data and analysis for project monitoring and evaluation. Program inputs include the salary of the Public Health Coordinator, a vehicle and operating expenses for health education activities, the services of a Senior Evaluation Specialist, and evaluation studies.

The expenditures on the Public Health Coordinator and supporting facilities are low, primarily because the position was not filled until July, 1982, a year later than planned. With respect to evaluation activities, the Senior Evaluation Specialist was not hired and only about half the budget designated for evaluation research by local consultants was spent. A major new item was introduced into the project in the form of nearly $100,000 worth of equipment for the Water Quality Laboratory of teh DLVW. Overall inputs into this program are only 84 percent of the inputs forecast in the Project Paper.

17. OUTPUTS

Under this project, significant progress can be measured in meeting output targets.

Water System Planning - Overall, the planning procedures of the RWS are well-suited to the technical conditions in the field, the personnel resources in the DLVW, and the fiscal cycle of the GOM. Cooperation between the DLVW and USAID has been good, and project reports and requisite review and approvals have been carried out in a timely manner.

Water Systems Design - The procedures for project design are based upon accumulated program experience and are well documented in a field handbood. The design criteria in this handbook appear to be appropriate for the schemes undertaken by the project. Random checks of both project design plans and actual systems in the field showed that the design criteria in the handbook are closely followed in project implementation.

Water Systems Procurement - Where goods and services are to be purchased, the project generally follows the relevant USAID and GOM procedures. In the case of the major commodity - PCV pipe - the supplier is of local manufacture. Over the two years of the project the price for pipe has not been increased, and service continues to be satisfactory.

Water Systems Construction - Day to day construction supervision and direction of construction activities are carried out by a water supervisor and a water project operator who work through volunteer leaders in directing the numerous self-help activities in the projects. Given the uncertainties often found in self-help activities, this procedure appears to work extremely well. Construction schedules are rarely delayed unduly, and the work is generally of high quality.

Water Systems Maintenance - The critical elements in this maintenance system is the villager's sense of commitment to and ownership of the water system, although the RWS maintains a monitoring program to assist the users in maintaining their system. The level of service of the system is high, because the users are providing the basic fron line maintenance at the tap and pipiline. Major maintenance was not assessed in this evaluation because the system is too new for any major problems to have occurred.

Health Education and Sanitation Promotion (HESP)- The Project Paper defines the following objectives for the HESP component of the project: to strenthen and coordinate the rural piped water program with the MOH; to expose up to 202,000 rural villagers to health education related to improved sanitation and hygiene practices; to focus health education activities in sanitation and hygience within each of the locations receiving rural piped water; and to train Malawians in basic health and sanitation education.

Training in health education and sanitation was begun as soon as the PHC joined the project. In addition, 13 of the 16 project areas have been reached by the HESP program, an overall HESP project strategy has been developed, experimentation has begun on improved pit latrines, and several demonstration laundry slabs have been constructed. The major problems confronting the HESP component are the shortage of field workers and the shortage of transport for both field workers and their supervisors. In addition, the development of relations between the MOH and the DLVW has been relatively slow.

Staffing and Training - DLVW - Ten senior and foreman staff were projected to receive training in the Project Paper, and although this training has been completed, the training envisioned for mid-level staff has fallen short by 25. However, if training activities continue over the life of the project as they have during the first 21/2 years, it is reasonable to assume that the proposed project output will be met.

Information Systems - Engineering data of three types are routinely collected by the RWS - construction, monitoring and metering. The HESP component, is just beginning to collect routine data. In the DLVW there is a need for expanded information activities in the areas of system metering and water quality monitoring, and both the DLVW and the MOH should consider developing a program in which they could share information.

Research Activities - The RWS has carried out an active, appropriate and highly successful research program aimed at improving the design and performance of the water supply systems. One result is that a water treatment technology appropriate to conditions in Malawi has been developed.

Social and Health Research - To date, social research has been limited to that carried on by the Center for Social Research in Zomba. The evaluation team has recommended that this research be continued and expanded.

18. PURPOSE

The purpose of this project is to provide up to 202,000 rural villagers (approximately 40,000 rural families) with access to safe water from communal taps, and to develop a rural water supply program - based on the provision of gravity-fed piped water - which will be expanded, strengthened and coordinated with the Ministry of Health. Significant progress has been made towards the project's purpose and goals, and in the case of the revised list of 16 sub-projects, the design population is more than double the original estimate.

A subgoal of this project is to expose up to 202,000 rural villagers to health education relating to improved sanitation and hygiene practices. This number too has been expanded under the revised list of sub-projects. In both the areas of construction and health, it is estimated that the project purpose and goal will be reached by the PACD.

19. GOAL/SUBGOAL - (see number 18 above)

20. BENEFICIARIES

The primary beneficiaries of this project are the rural smallholders who constitute 85 percent of the population of Malawi. Nearly 80,000 rural families will gain access to a safe, year round, readily available source of water through a community tap. By the completion of the project an estimated 450,000 rural people will have safe water for drinking, cooking, bathing and washing. Through the health component, these same rural people will have had access to training in basic health and sanitation education.

21. UNPLANNED EFFECTS

Although not called for in the Project Paper, the project implementors have planned to test additions to the current program (improved maintenance procedures, more easily maintained water filters, etc) and will explore the possibility of introducing irrigation of dry season crops and generation of electricity through the use of a mini-hydrogenerator.

22. LESSONS LEARNED - None at this time.

23. SPECIAL COMMENTS OF REMARKS - None at this time