

2 3 2 . 2  
7 7 G U

# GUIDE TO SELECTION AND TRAINING OF VILLAGE HANDPUMP CARETAKERS



LO: 232.7764

## GUIDE TO SELECTION AND TRAINING OF VILLAGE HANDPUMP CARETAKERS

---

The Rural Water Supply programme in Tamil Nadu is intended to cater to the first and most basic need of the villages: drinking water. Great strides have been made in this direction. Since 1971, a total of 14,210 wells have been drilled and handpumps installed in the villages of Tamil Nadu. Approximately 6700 of these were installed during the period April 1976 to September 1976 when well-drilling activity was intensified in order to combat the severe drought conditions then prevalent in the State.

**Handpump Maintenance:** Although progress with regard to well drilling and handpump installation has been impressive the same is not true of maintenance, unfortunately. A large proportion of the handpumps installed break down, and remain unrepaired for long periods of time because of the lack of an adequate maintenance system. Now, fortunately, something is being done to rectify this situation. An improved system of handpump maintenance, usually referred to as the '3-tier maintenance system', has been introduced in Tamil Nadu. The new system is working well. In the areas where it has been introduced the number of handpumps not functioning has been dramatically reduced, in some cases almost to zero.

The 3-Tier Maintenance System provides for staff at village, block and district level to look after all handpumps.

**At Village level:** In the village there is a Handpump Caretaker appointed by the community. He ensures that the handpump is working properly, that there is proper drainage of excess water, that there is some sort of control over the use of the handpump to ensure that it is not abused, and that the villagers are aware of the importance, for health reasons, of taking drinking water from a protected source. If a handpump breaks down it is his duty to report it to the district maintenance team.

**At Block Level :** There is one Inspector-Mechanic whose duty it is to regularly visit and check approximately 100 handpumps. He reports breakdowns that he cannot repair ; to the District Maintenance Team. He is equipped to repair minor faults in the pumphead mechanisms.

**At District Level :** Each district has one or more Mobile Maintenance Teams which can quickly reach and repair any hand-pump that breaks down. These teams consist of three men under a Assistant Engineer, equipped with a vehicle.

Mobile Maintenance Teams carry the tools and spare parts needed to do any type of handpump repair job. They also install new conversion heads on old handpump installations.

**Hand pump caretaker :** The first tier of the new maintenance system—the village Caretaker—is crucial to the success of the system. Unless the Tamilnadu Water Supply and Drainage Board staff is informed promptly when a handpump breaks down repairs are delayed and the whole maintenance system breaks down.

### **PRELIMINARY STEPS :**

Selection and training of the Caretaker is of utmost importance. How this should be done is described below. The primary responsibility for selection and training rests with the Divisional Development Officer. However, since this is a task which requires the participation of several individuals, the DDO should draw on the services of the Block Development Officer and other members of his staff as needed :

1. The first step is for both the DDO and the BDO to become personally acquainted with the most important element of the rural water supply programme : the handpumps. The best way to do this is for the two officers together to visit a few villages in which hand-pumps have been installed, obtain a first-hand impression of how they are functioning, and talk with the villagers. One day should be sufficient for this, and if the two officers have other matters to attend to in the village (which they undoubtedly will) this can be combined with the handpump inspection.

**2. Map preparation:** As soon as possible, a block map should be prepared showing the location of all handpumps, existing and proposed. The boundaries of each Gram Sevak's circle should also be shown on this map so that it is clear to the Gram Sevaks, as well as to the other block staff, the number and location of handpumps within each circle. This map will serve as useful reference to anyone who is concerned with the rural water supply programme. It may also be used for briefing visitors.

**3. Meeting of Block staff:** When the map is ready the DDO should convene a meeting of the following block staff in order to explain the improved handpump maintenance system and what their respective responsibilities in it.

Block Development Officer  
Union Engineer / Union Overseer  
Extension Officer (Panchayat)  
Extension Officer (Education)  
Extension Officer (Social Welfare)  
Gram Sevaks, Gram Sevikas  
Inspector-Mechanic (Rural Water Supply)  
Medical Officer, PHC  
Health Inspector, PHC

**4. At this meeting attention should be given to the following topics :**

- (a) *Introduction to the improved, 3-tier handpump maintenance system.*
- (b) *Instructions to the Gram Sevaks on how to proceed with the selection of candidates for Handpump Caretaker. Each Gram Sevak should be asked to submit a panel of names (not less than two, not more than six) of persons for each of the villages in his circle in which there is a handpump. (Criteria for the Selection of candidates are given below, along with a description of the Caretaker's duties.)*
- (c) *Instructions to Gram Sevaks regarding the collection of basic information about each handpump in the Gram Sevak's circle. This includes technical information such as depth of the bore, depth at which water was struck, yield, make and model of pump, etc., all of which are available*

with the TWAD Board. Also required is information about the current condition of each handpump: whether the flow of water is adequate, whether all the parts of the pump are functioning properly, the condition of the pump platform, and whether proper provision has been made for disposal of excess water. The Gram Sevak is the best person who can supply this sort of information.

**Criteria for Selection of Handpump Caretakers:** Care should be taken in selecting Caretakers to ensure that the position will be held by an individual who will take his responsibilities seriously, who possesses the necessary qualifications, and who has the trust of his fellow villagers. The following criteria can serve as a guide in choosing candidates for the position :

- (1) Preferred age : 17—25 years.
- (2) Preferably someone with mechanical ability (e.g., cycle shop owner, pump or motor mechanic).
- (3) Should be literate. Preferably someone who has reached high school level or above (not a requirement).
- (4) Should be a user of the pump.
- (5) Must have own means of support.
- (6) Should be physically fit and active.

**Duties of the Handpump Caretaker are :**

1. See that the villagers operate the handpump properly so that it will have a long life.
2. Service the handpump once a week.
3. See that excess water is channelled into a garden or soakage pit.
4. Keep the area around the handpump clean and free of refuse.
5. If the handpump breaks down, report it to the proper authority.
6. Maintain the handpump log book.
7. Explain to the villagers that water from a handpump is better for their health than water from a pond, river or open well.

If the Caretaker performs these duties faithfully the handpump which has been put in his charge will function properly and provide ample water for all the families it serve.

5. **Final selection of Caretakers** should be done by the BDO as soon as possible after the Gram Sevaks have submitted their lists of Caretaker candidates. He should visit the villages in his block personally, meet the candidates and make the final selection. It would be well if the Assistant Engineer (TWAD Board) who is responsible for the maintenance of handpumps, as well as the Medical Officer of the Primary Health Centre, accompanies the BDO on these visits. This will facilitate prompt follow-up on the repairing of handpumps which the Gram Sevaks have earlier reported needing attention. It is important that the introduction of the improved maintenance system and the selection of Caretakers be accompanied at the outset by a vigorous drive to put all malfunctioning handpumps into working order: This will impress the villagers and the Caretakers themselves with the fact that the Government is sincere in its announced intention to help them.

6. **Briefing Panchayat officials.** It is important that not only Government departments but village institutions as well should be acquainted with the rural water supply programme and its objectives. *The more the villagers themselves know about the programme the greater the cooperation one can expect from them.* A good way to do this is for the DDO or BDO to attend one of the regular monthly meetings of the Panchayat Union Council and tell these village leaders about the programme, giving particular attention to the maintenance aspect.

## TRAINING

Once the Caretakers have been selected a suitable training programme should be organized for them at Block headquarters or some other suitable location. The purpose of such a training programme would be to familiarize them with all the activities of the rural water supply programme and to make it clear to them what their role in it will be.

How such a training programme should be organized and carried out is described below :

1. Supervision of the training course should be the responsibility of the DDO, assisted by the BDO. Other district staff who should be involved in the training are the Executive Engineer (Rural Water Supply) and the District Health Officer.

2. The training course should include, besides Caretakers, the various block and district officials whose positions are likely to involve them directly or indirectly with the rural water supply programme. This will encourage understanding and cooperation. The invitees should include Gram Sevaks and Gram Sevikas, Extension Officer (Social Welfare), Extension Officer (Panchayat), Extension Officer (Education), Union Engineer/Union Overseer, Health Inspector, and the Block Inspector-Mechanic. The number of Caretakers attending the training course should not exceed 40. A group larger than this is hard to manage. If the Block is a small one and the number of Caretakers comes to far less than 40 it would be best to combine two block training courses into one.

3. Training materials for the course will be supplied by the TWAD Board. These will include a "Guide for Handpump Caretakers", a training flipchart, and a full-size cut-away model of an actual handpump. Upon completing the course each trainee receives a certificate and a set of tools.

4. Two days should be allowed for the training programme. Travel expenses for the trainees to and from the training centre will be met by the TWAD Board, as well as the cost of their food. It is advisable to make arrangements for providing food and overnight accommodation for the trainees at the training centre itself. A suggested timetable for the training, as well as a syllabus outlining the subjects to be covered, is given in Annexure 1 & 2. It is important that the training should be suited to the level of the trainees, and that it should be practical in its emphasis rather than academic and theoretical. Trainees should be encouraged to ask questions and to participate whenever there is a discussion period. The district and block officials who conduct the training should see this as an opportunity to learn more about village life and problems themselves, as well as teaching the trainees. On no account should they 'talk down' to the trainees or imply that they are ignorant because they are villagers.

5. Since the Caretakers are volunteer workers and receive no pay from the Government for their services it is important to find other means instead of money to reward and encourage them. During the training period there are a number of ways in which one can, with very little effort and expense, provide such encouragement. For example: issuing a certificate when training is completed, arranging for the District Collector or some other important person to present each trainee with his set of tools, inviting All-India Radio to come and interview some of the trainees, providing souvenir photographs of the training class, etc.

6. Orientation of the Inspector-Mechanics should be part of the Caretaker training course. Most of the information that is conveyed to the Caretakers during training is also applicable to the Inspector-Mechanics. As for their specific duties, time can be found during the Caretaker training sessions to explain these to the Inspector-Mechanics.

## FOLLOW-UP ACTIVITIES

The initial training of Handpump Caretakers described above is important. It introduces them to the rural water supply programme, acquaints them with its varied activities, specifies their particular role in the programme and gives them a chance to meet the Government officials at district and block level who are also working in the programme. But this one training session is not enough by itself. Since these Caretakers are volunteers, not paid Government servants, ways must be found of giving them regular encouragement and support after they take up their assignments in the village. Following are some suggestions on how this can be done :

1. Bring the Caretakers into Block headquarters regularly—at least once every quarter—and organise a one or two-day refresher training course for them. This will give them an opportunity to meet each other again, as well as the Block staff. Such meetings will benefit not only the Caretakers but the Block staff as well. Hearing the Caretakers recount their experiences and problems will give the staff new insights, and provide them with information which they might not have had access to otherwise.

2. Whenever TWAD Board or Block staff visit a village they should make it a point to call on the Caretaker, have a chat with him, inspect and Initial his handpump log sheet, and make sure that he has a supply of reporting cards. Occasional meetings such as this with important outsiders enhance the importance of the Caretaker in the eyes of his fellow villagers and give his ego a boost.

3. Writing an occasional letter to a Caretaker to convey some information or to praise him for work well done is also rewarding. A newsletter circulated periodically to all Caretakers can also be effective. It can serve as a two-way channel of communication, conveying news and information *to* the Caretaker as well as providing a way for the Government to receive reports, questions and comments *from* the Caretaker.

The foregoing are some of the methods that can be employed, in the absence of financial remuneration, to make the Caretaker feel that he is important, appreciated, and a valued member of the 'team'.

**Creating public awareness.** It is important that the rural population as a whole, not only the Caretakers, should have some knowledge of the rural water supply programme, as well as an appreciation of the importance of a protected water supply for their health and well-being. There are several ways of accomplishing this. One is seek out village women's organizations, such as Mahila Mandals, and introduce handpumps and pure drinking water as a topic for discussion in their meetings. The monthly meetings of village teachers provide an opportunity for impressing this influential group with the importance of having a safe, protected supply of drinking water in every village. And, since village leaders customarily wield considerable influence in village affairs, occasional informal discussions with members of the village Panchayat on matters relating to rural water supply can produce beneficial results.

**ANNEXURE — 1**  
**TENTATIVE TRAINING SCHEDULE**

Subject	Instructor	Time
<b>First Day</b>		
Introduction ..	DDO	0900—0930
Description of RWS Programme in Tamil Nadu ...	TWAD	0930—1000
Health and environmental sanitation. Water-borne diseases and the importance of pure water	DHO	1000—1045
<b>TEA BREAK</b>		1045—1100
Continuation of discussion of health as it relates to pure water and environmental sanitation	DHO	1100—1130
Geophysical survey, drilling and installation of handpumps ...	TWAD	1130—1200
The 'anatomy' of the handpump ...	TWAD	1200—1230
Operation of the handpump; preventive maintenance; disposal of excess water	TWAD	1230—1300
<b>LUNCH BREAK</b>		
Field demonstration of the dismantling and repair of a broken-down handpump ...		1500—1800
Field demonstration of how to construct a soakage pit.		
Film show ...		Evening
<b>Second Day</b>		
Introduction to 3-tier handpump maintenance system ...	TWAD	0900—0930
Duties and responsibilities of the Caretaker ...	..	0930—1130
Use of reporting cards and log sheets ...	..	
Numbering of handpumps ...	..	1130—1200
Review of training. Comments and suggestions by trainees. Interviews by A.I.R. ...		
Closing function. Distribution of tools. ...		

## ANNEXURE — 2

### TRAINING SYLLABUS

Everything that is taught during the Caretaker training course should be practical, down-to-earth, and directly related to the trainee's responsibilities as Handpump Caretaker. The topics to be covered during the training period will include the following :

- The parts of a handpump
- 3-tier handpump maintenance system
- Duties of the Caretaker
- Care and operation of the handpump
- Drainage
- Health aspects
- Reporting and record-keeping
- Tamil Nadu Rural Water Supply Programme

#### THE PARTS OF A HANDPUMP

How the handpump is constructed and how it works, above ground and below. (Sufficient information about this should be given, but not too much. It should be kept in mind that the Caretakers are not being trained as mechanics).

#### DUTIES OF THE CARETAKER

1. See that the villagers operate the handpump properly so that it will have a long life.
2. Service the handpump once a week.
3. See that excess water is channelled into a garden or soakage pit.

4. **Keep the area around the handpump clean and free of refuse.**
5. **If the handpump breaks down, report it to the proper authority.**
6. **Maintain the handpump log book.**
7. **Explain to villagers that water from a handpump is better for their health than water from a pond, river, or step-well.**

## **CARE AND OPERATION OF THE HANDPUMP**

Proper care and operation of the handpump will lengthen its life and reduce the chances of breakdown.

**Preventive Maintenance Procedure.** Once a week the Caretaker should do the following :

1. **Check axle-bolt. Make sure lock-nut is tight.**
2. **Check flange bolts fastening water chamber to pedestal and make sure they are tight.**
3. **Make sure handpump is firm on its base.**
4. **Clean out trash from drain hole below inspection cover.**

### **Operating the Handpump**

Proper use of the handpump is important. While pumping:

1. **Stand directly behind the handpump.**
2. **Use long strokes, not short ones.**
3. **When finished, let handle return slowly to resting position.**
4. **Don't let excess water collect around the handpump. See that it runs into a garden or a soakage pit.**
5. **Keep the area around hand pump clean and free of refuse.**

## **DRAINAGE**

Excess water should not be allowed to collect around the handpump. Otherwise the area will soon become muddy and unhygienic. It may even become a breeding place for mosquitoes, which transmit malaria and filariasis.

The ideal solution is to channel the water into a garden. If this is not possible the next best solution is to construct a soakage pit.

## **HEALTH ASPECTS**

### **Pure drinking water is necessary for good health**

1. One of the major causes of common diseases like hepatitis, dysentery, cholera and typhoid is contaminated drinking water. The best protection is to drink water only from a protected source, such as a handpump.

2. Appearances are sometimes deceiving. Water which looks, smells and tastes clean may actually be highly contaminated. The water in a step-well, tank or river is much more likely to be contaminated than water from a handpump.

3. Even the handpump itself may be a source of disease if it is not properly installed. It is the responsibility of the mechanic who installs it to see that it is firmly fixed on its base and that there are no cracks in the cement platform which would permit dirty water to run down outside the pipe into the well.

4. How you take care of the water after it leaves the pump is also very important. Water which flows pure from the pump will become contaminated if you collect it in a container which is dirty, or if you store it carelessly. Make sure the container you use for collecting water is clean, and that drinking water stored in the house is kept covered and protected.

## **TAMIL NADU RURAL WATER SUPPLY PROGRAMME**

A description of TWAD Board's rural water supply field operations, including policies, organization, staff, activities (geological survey, drilling, handpump installation) and equipment.



**TAMIL NADU WATER SUPPLY  
AND DRAINAGE BOARD**

**UNICEF PUBLICATIONS**

**1977**

