

**REPORT**

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**ON**

**EVALUATION STUDY OF RURAL WATER SUPPLY PROGRAMME  
IN BIHAR**

**PREPARED**

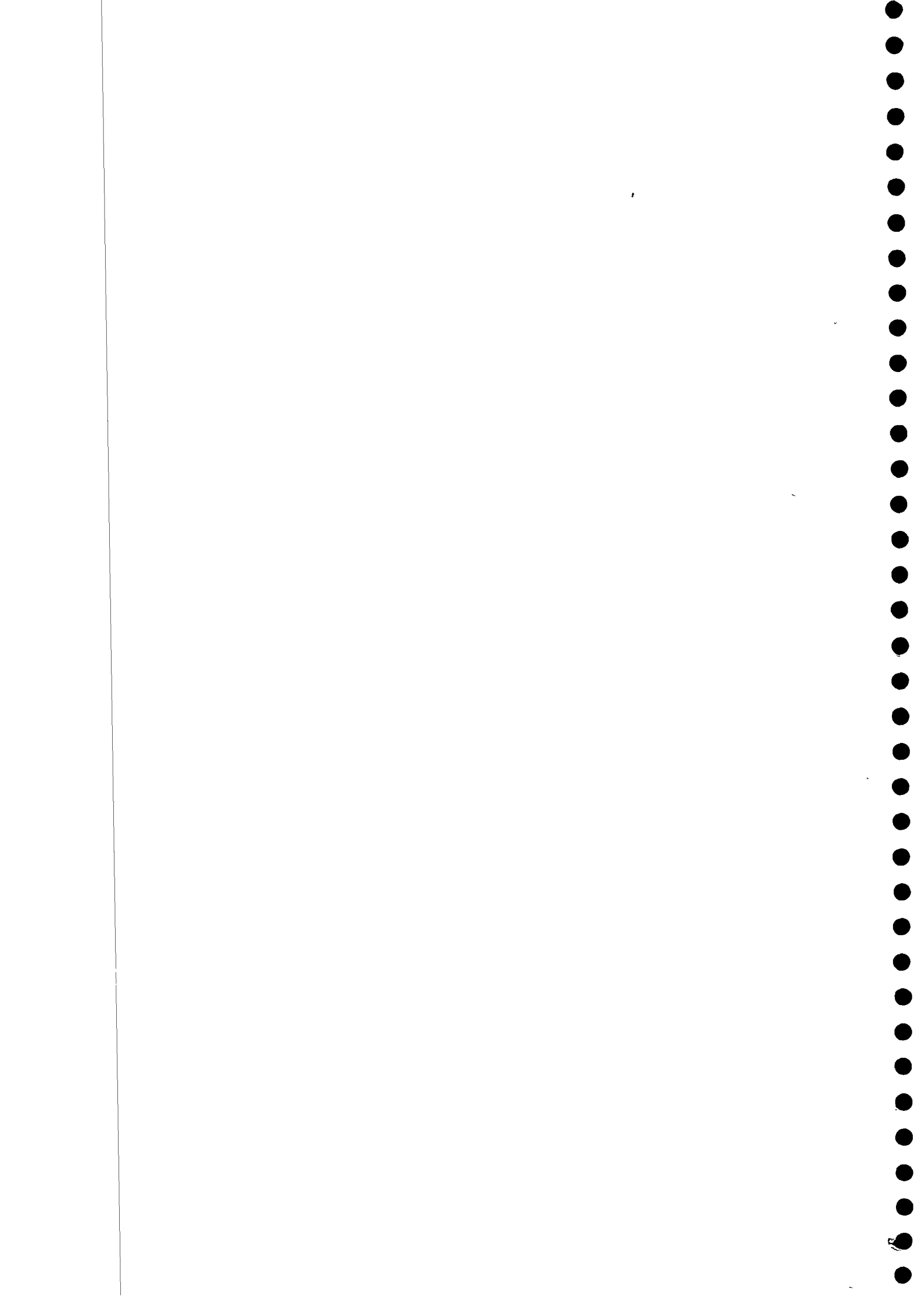
**FOR**

**RAJIV GANDHI NATIONAL DRINKING WATER MISSION  
MINISTRY OF RURAL AREAS AND EMPLOYMENT  
GOVERNMENT OF INDIA**

**PREPARED**

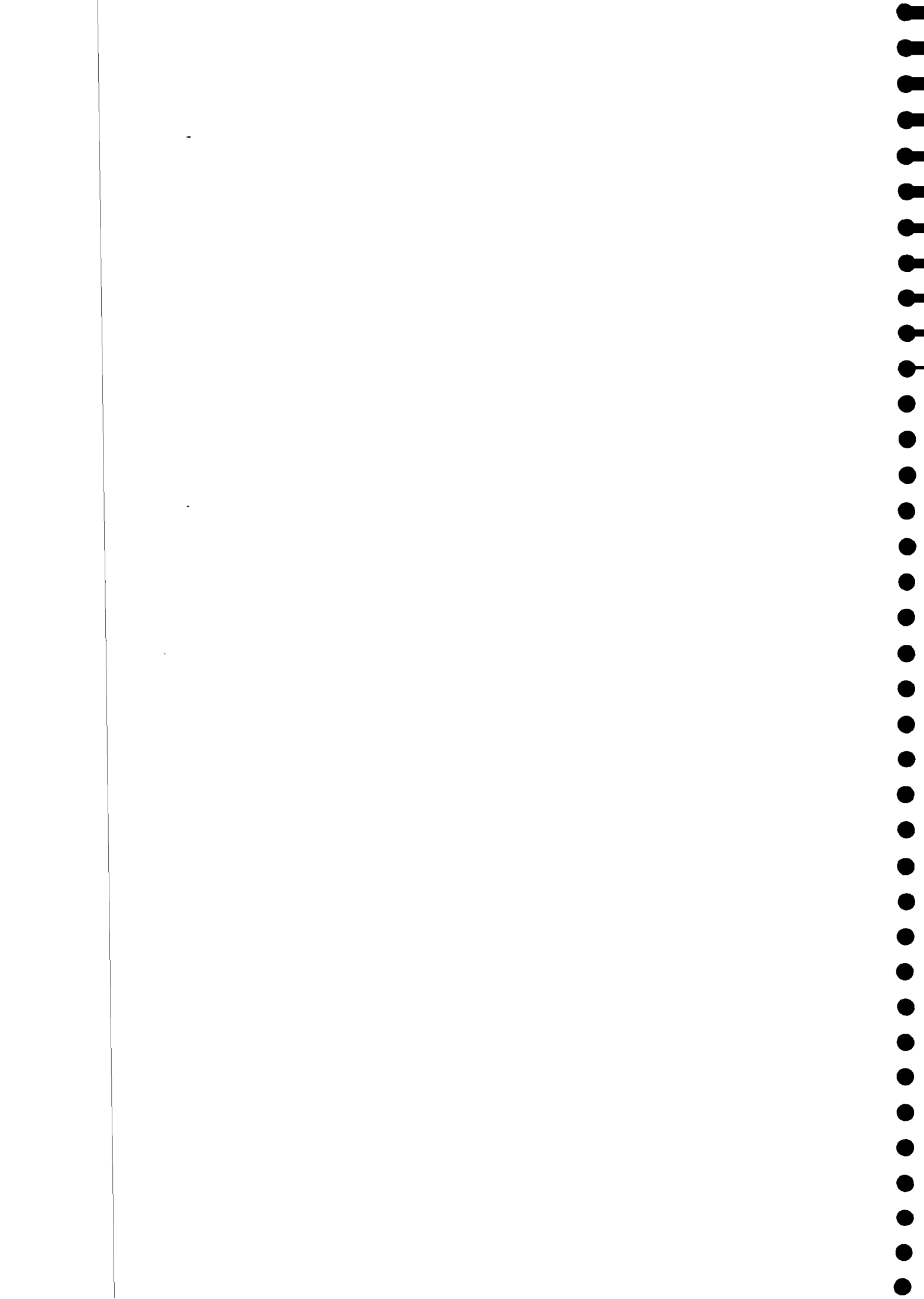
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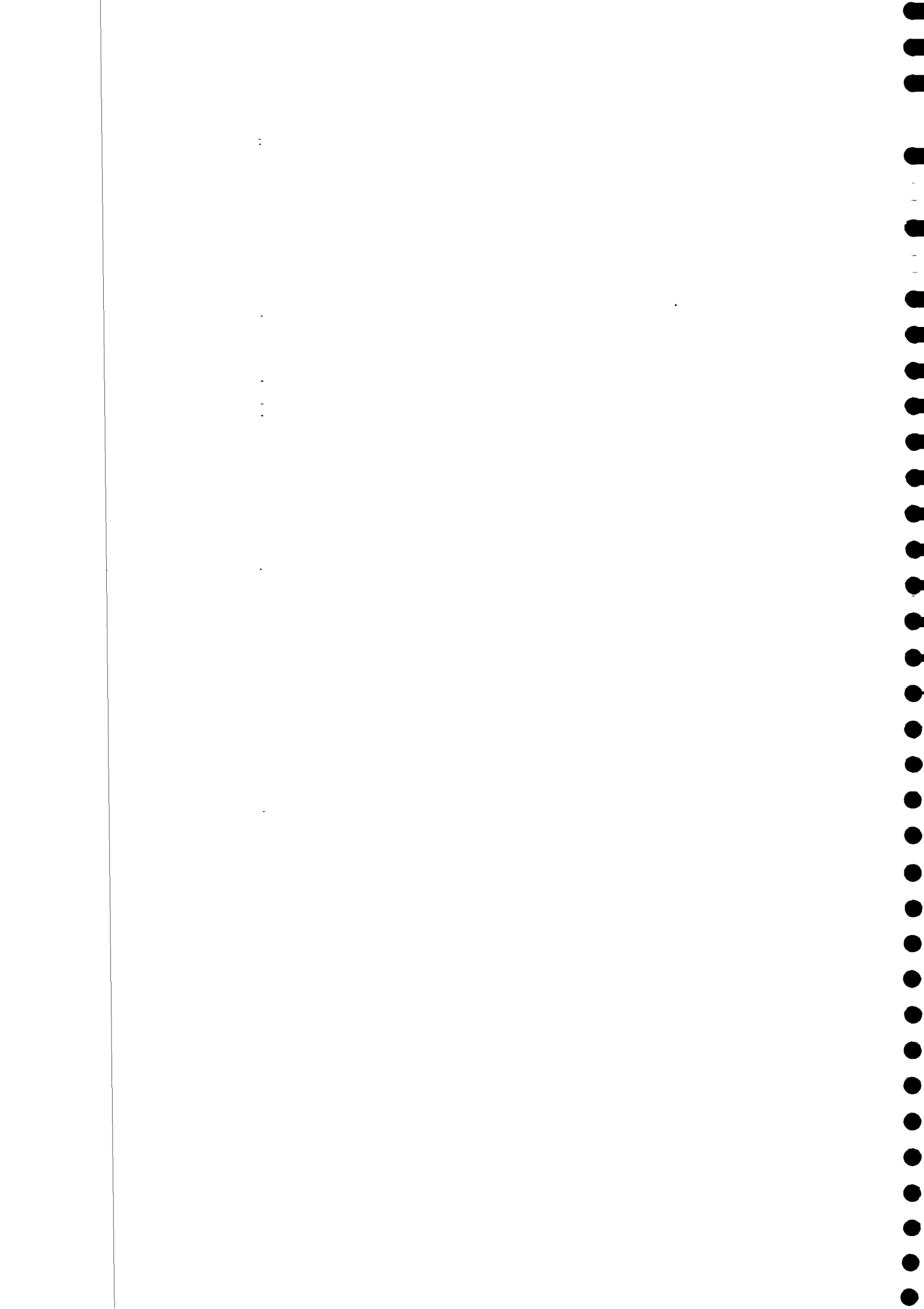
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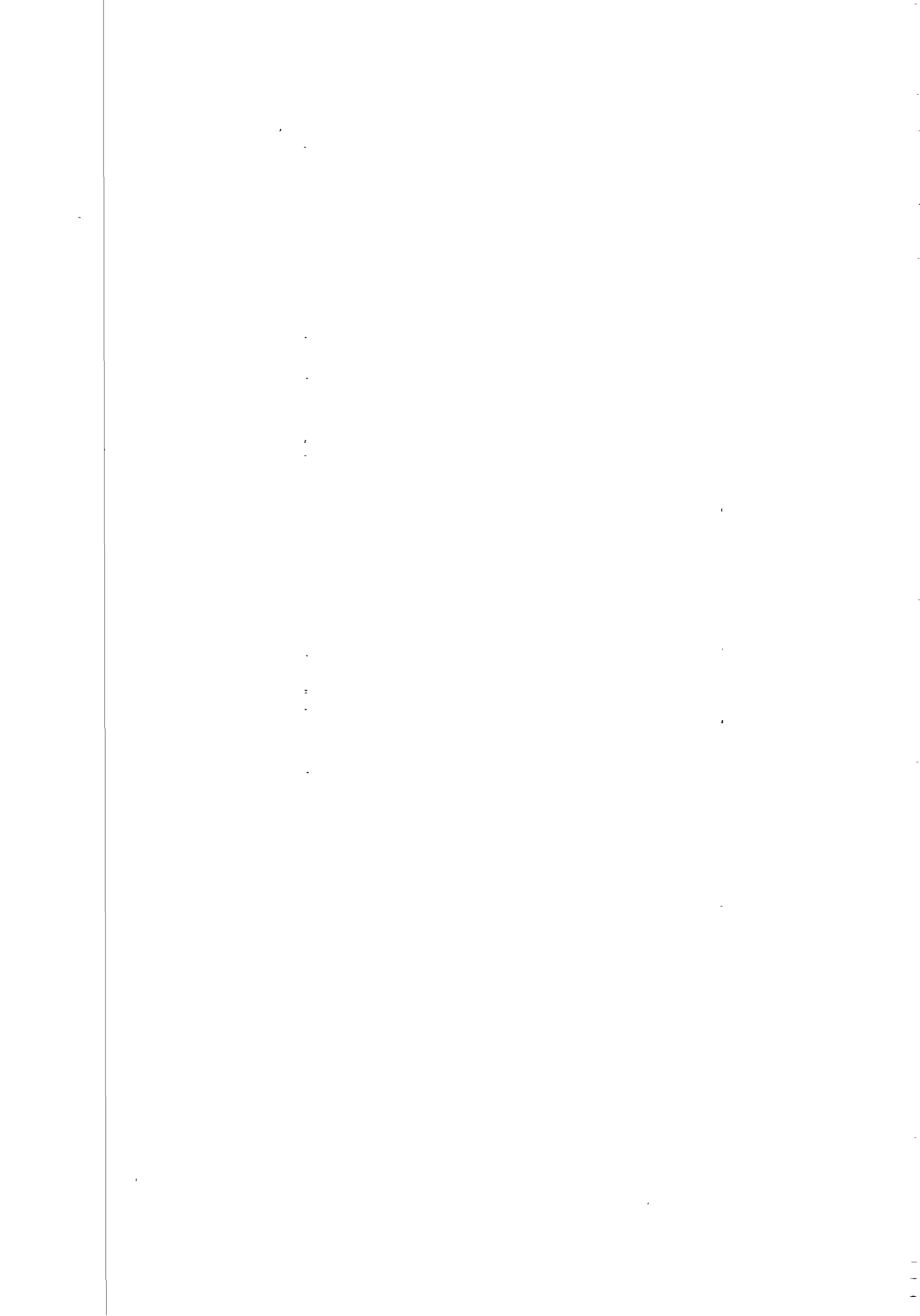
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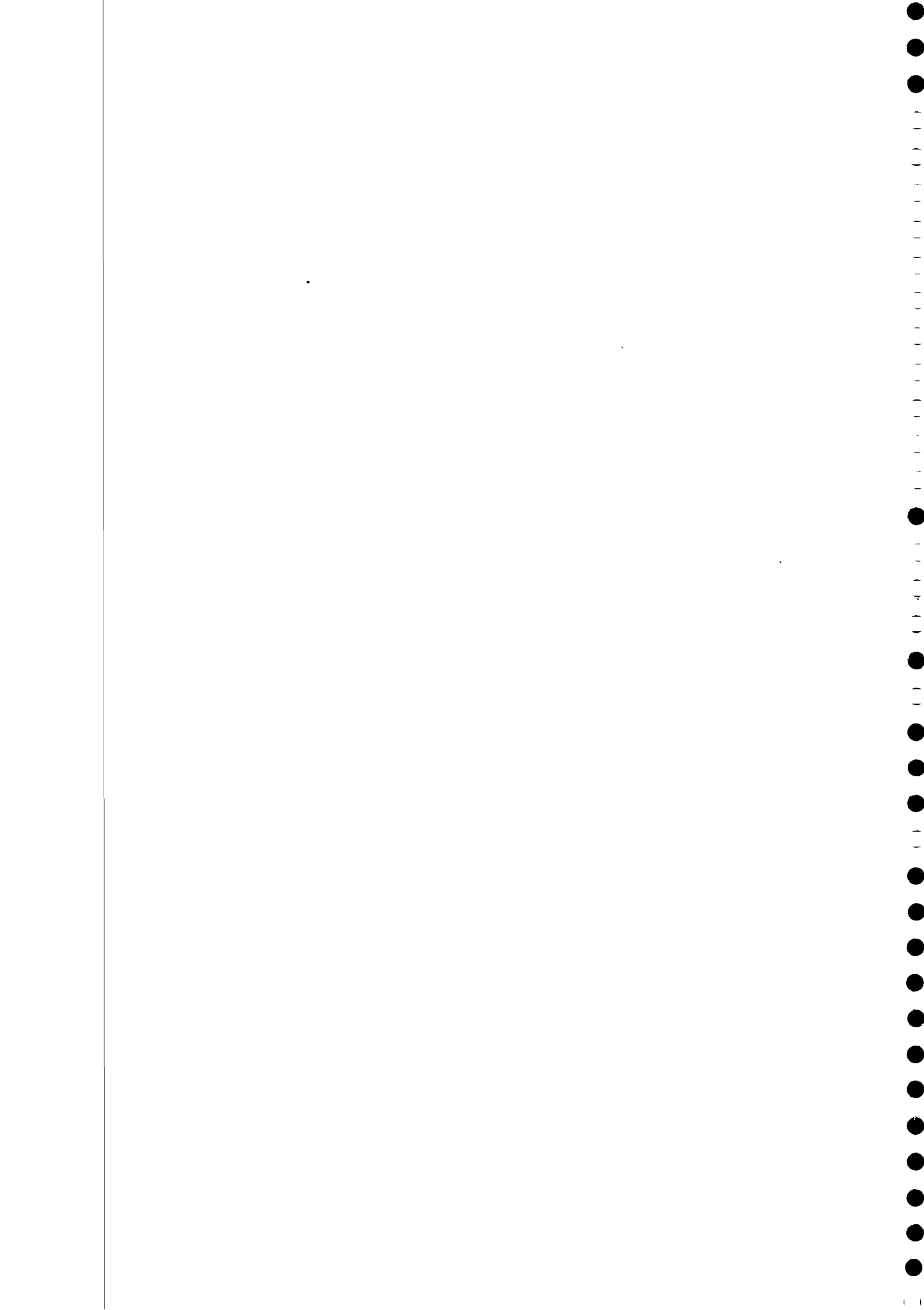
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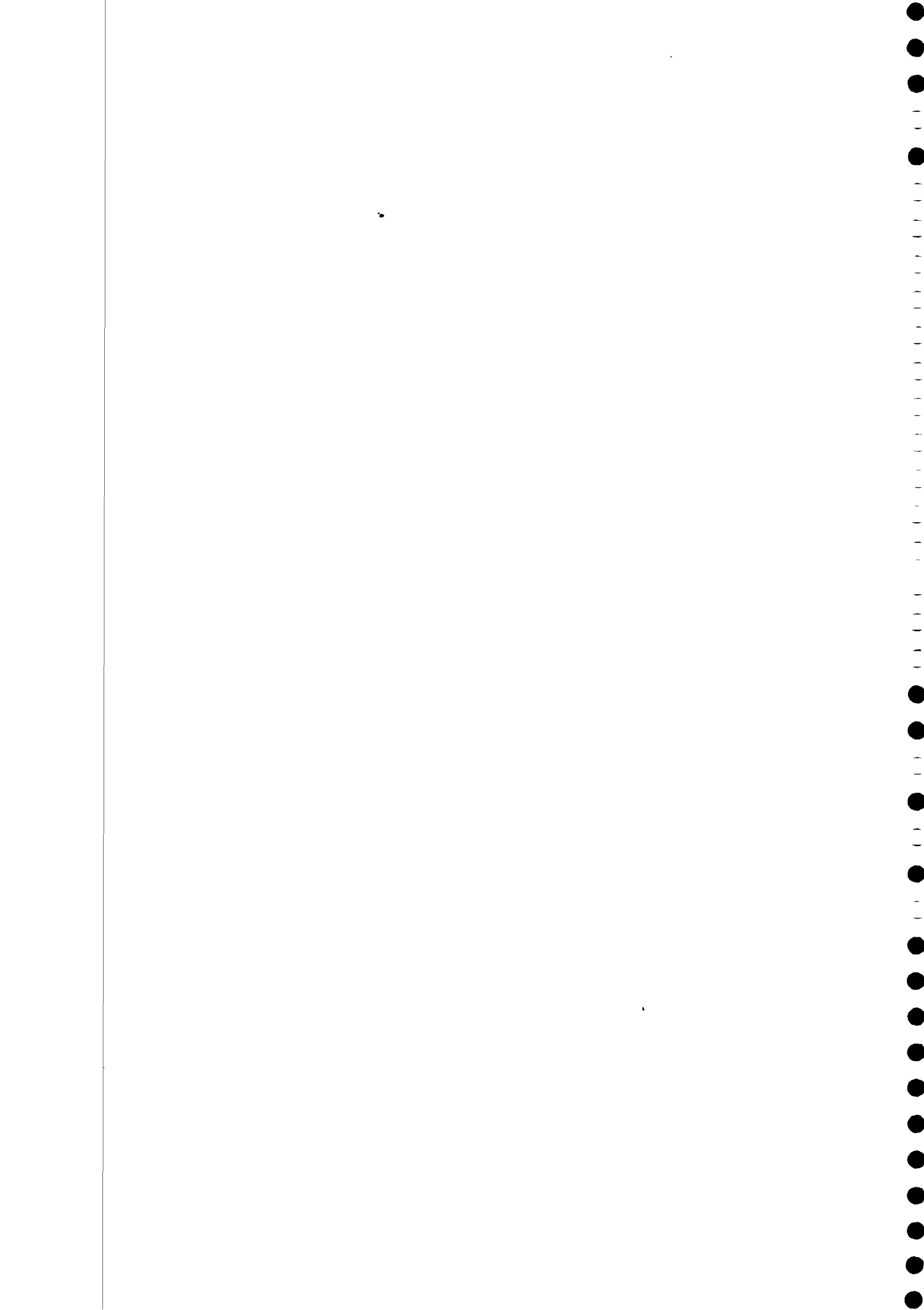
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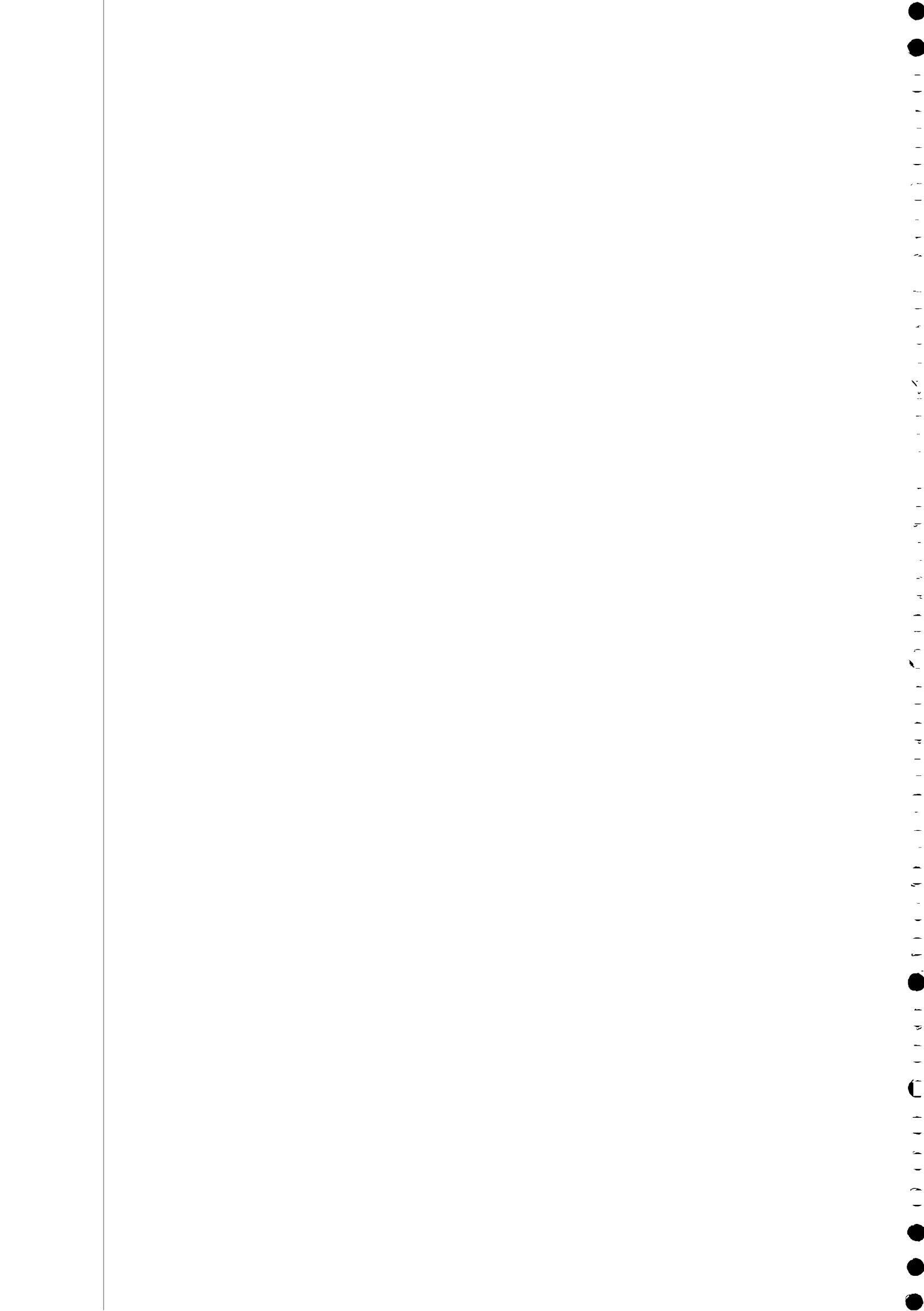




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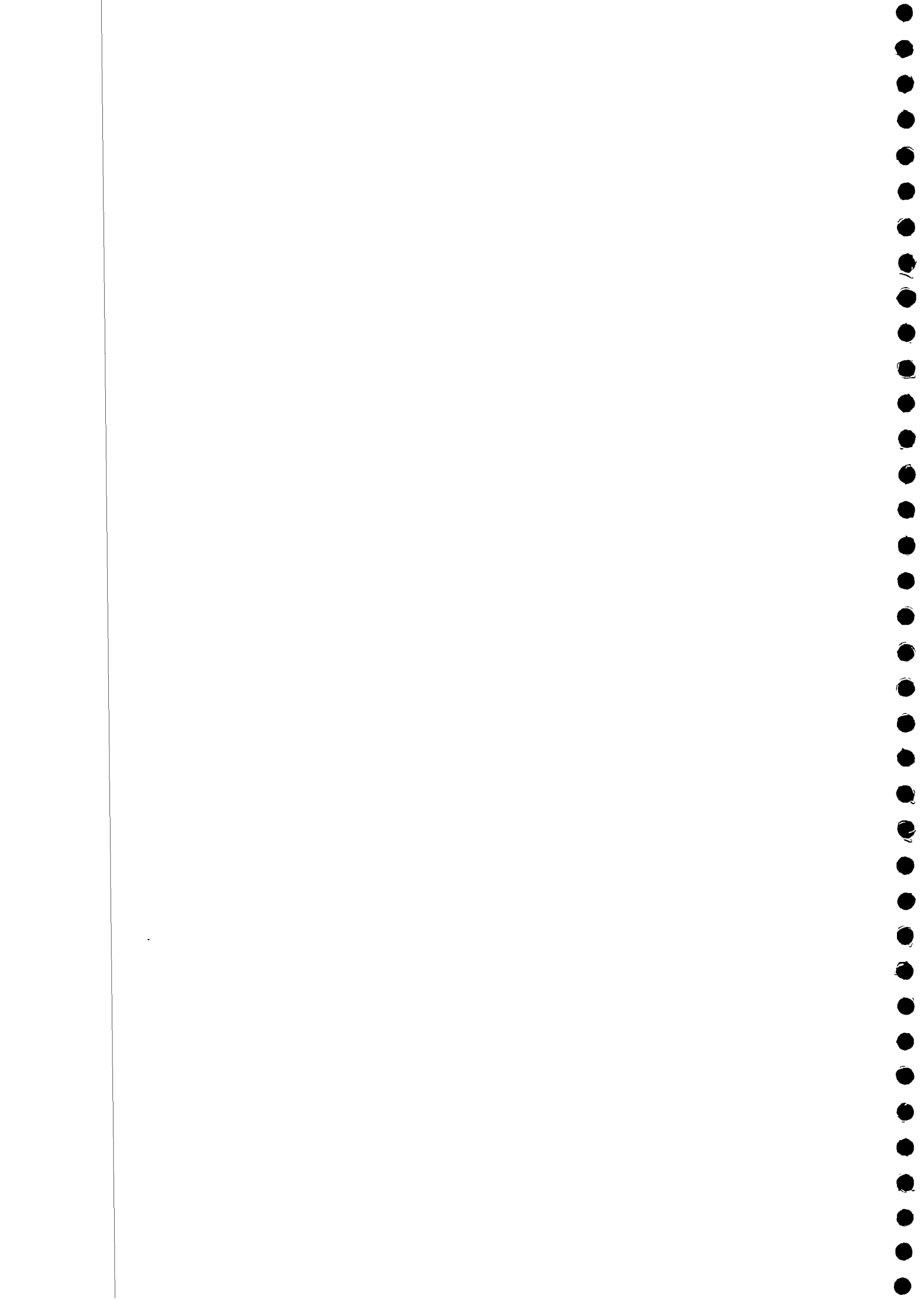
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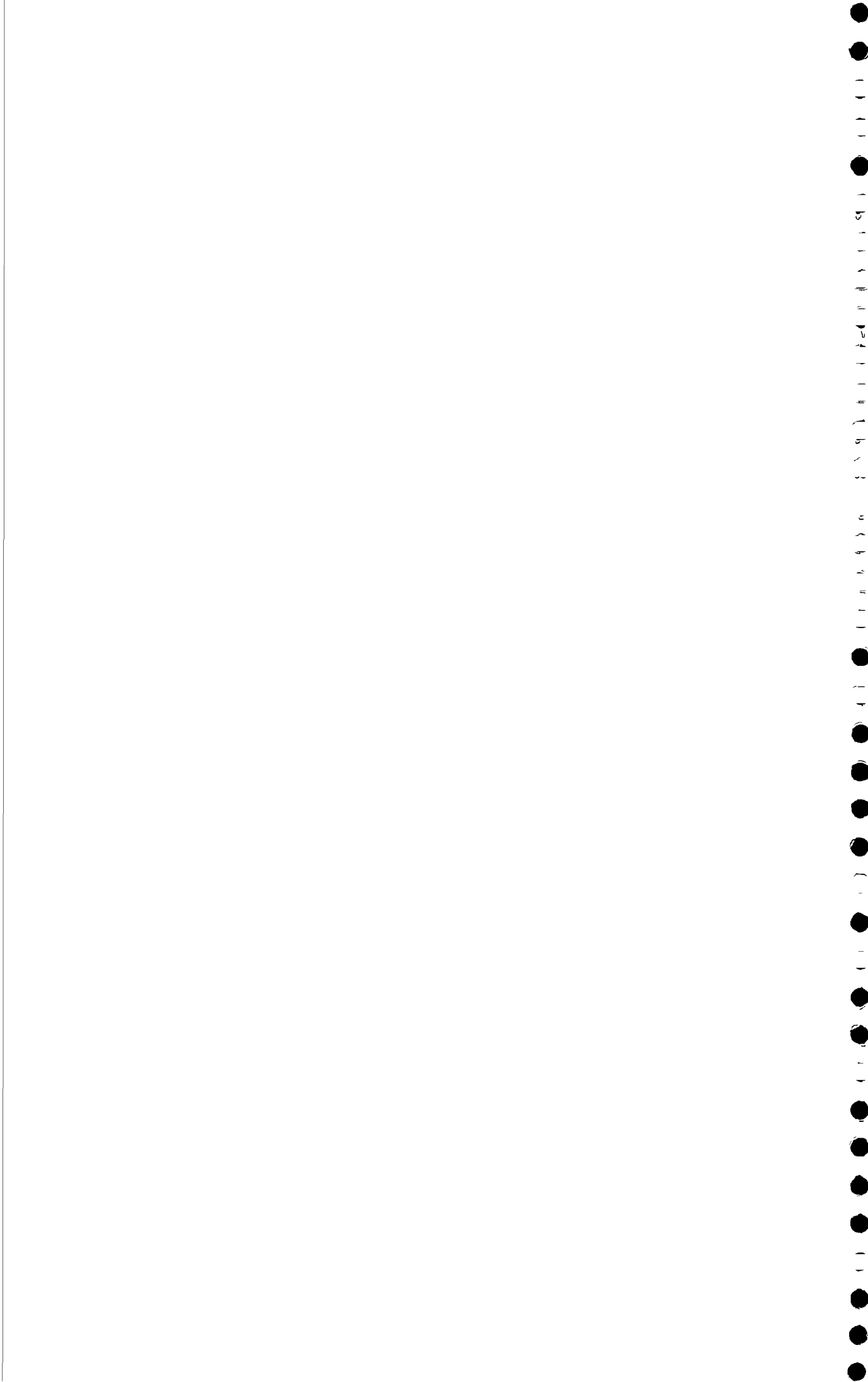
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CHAPTER I

INTRODUCTION

BACKGROUND

National Water Supply and Sanitation Programme was introduced in the social welfare sector in 1954. The states gradually built up the Public Health Engineering Departments (PHEDs) to tackle the problem of water supply and sanitation. In spite of this, it was found during mid-sixties that Rural Water Supply schemes were implemented mostly in the easily accessible villages neglecting the hard core rural areas where no safe sources were available. Therefore, the Government of India requested the states to identify such villages as No-source Problem Villages (PVs) and to make special efforts to formulate and implement schemes for these villages.

In view of the magnitude of the problem and to accelerate the pace of coverage of PVs the central government introduced the Accelerated Rural Water Supply Programme (ARWSP) in 1972-73 to assist States and Union Territories with 100 percent grants-in-aid to implement schemes in such villages. This programme continued till 1973-74 and when in 1974-75 Rural Water Supply was introduced under Minimum Needs Programmes (MNP), ARWSP was discontinued. In 1977-78 when the progress of supply of safe drinking water to identified problem villages was not as per expectations, ARWSP was re-introduced to augment efforts under MNP.

In order to ensure maximum inflow of scientific and technical inputs into the rural water supply sector and thus to deal with quality problems of drinking water, National Drinking Water Mission (NDWM) was launched in 1986. The NDWM has now been renamed as Rajiv Gandhi National Drinking Water Mission (RGNDWM). All the schemes/activities which were under implementation under the National Drinking Water Mission continue to be implemented under the renamed Mission with the main objective of providing sustainable safe drinking water supply to entire uncovered no source villages in the next few years and to simultaneously create awareness among the rural people about the hazards of using unsafe water.

Rural Water Supply Programmes is a state subject and is implemented by the States through their Public Health Engineering Departments. In view of its importance in improving the quality of life of rural people, large funds are provided through the activities of Rajiv Gandhi National Drinking Water Mission in the central sector to supplement states efforts through Minimum Needs Programme.

About 94,000 problem villages were covered till the beginning of Vith Plan. A survey carried out by States and Union Territories



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for identification of problem villages indicated that about 2.31 lakhs problem villages remained to be covered as on 1.4.1980 out of which 1.92 lakh villages were covered in the VIth Plan. PVs were again identified through a fresh survey conducted in 1985 and as a result, 1.62 lakh PVs remained as on 1.4.1985 to be covered in VIIth Plan. As on 1.4.94, only 278 villages out of these 1.62 lakh problem villages remained to be covered. However, a fresh survey carried out during 1991-93 and validated in 1994 revealed that as on 1.4.94, out of 13.18 lakh habitations, 1.41 lakh habitations do not have any source of water provided by the government. In terms of population, 95% people have access to either full or partial supply of safe water. In many of these habitations which are reported to be not covered by government sources, private sources exist. A number of States have furnished revised data and according to fresh information the total number of habitations in the country has increased to 14.31 lakh out of which 61,724 habitations do not have any source of water as on 1.4.97.

Though the water supply facilities through private sources exist, government have taken concrete action to supply safe water to all the 1.41 lakh habitations identified as 'not covered' within the VIIIth Plan period. Government also plans to cover all the habitations afflicted with quality problems like fluorosis, brackishness etc.

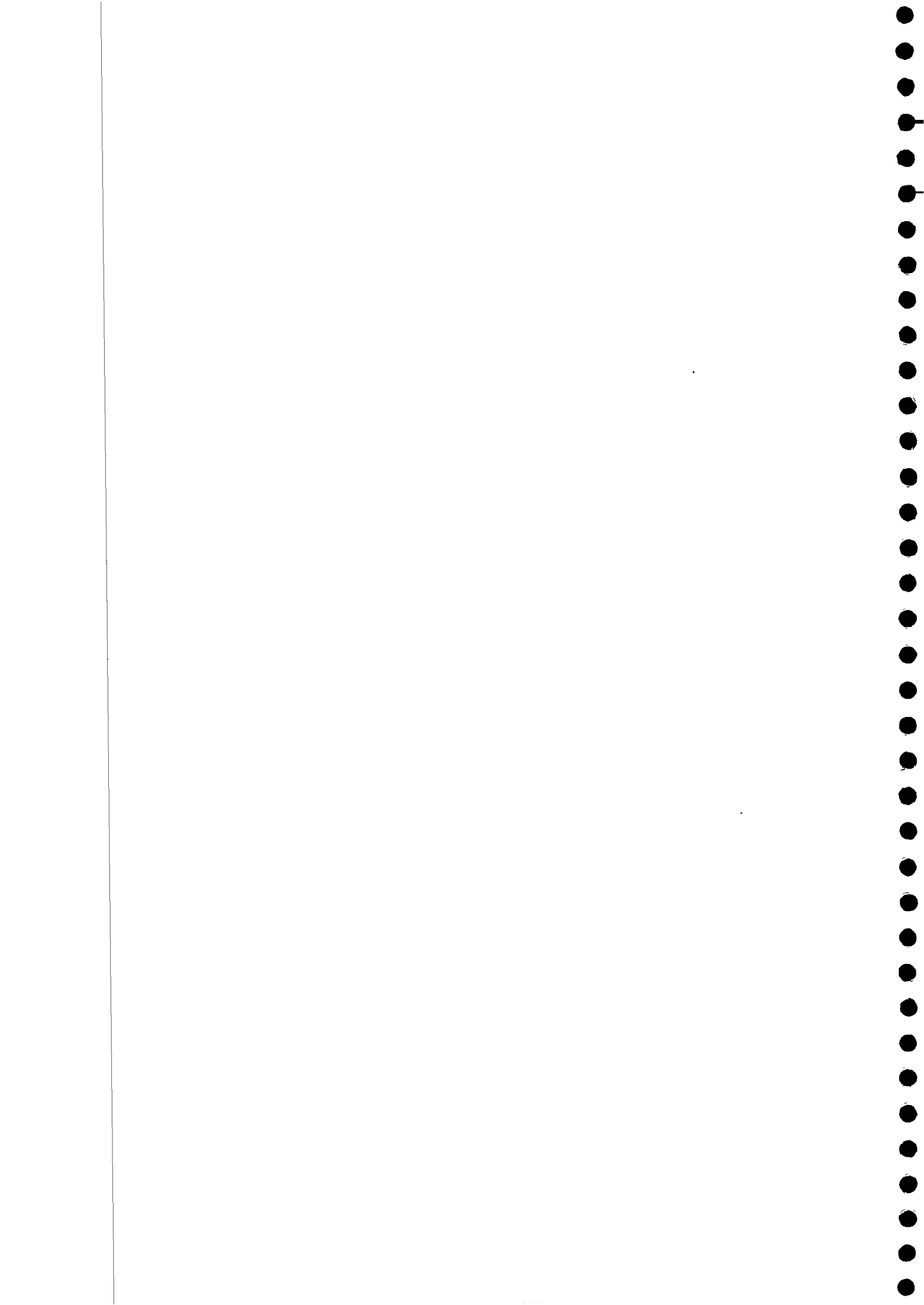
**Norms**

The following norms are being followed under ARWSP for providing safe drinking water to the rural population :

- \* 40 litres of safe drinking water per capita per day (lpcd) for human beings.
- \* 30 lpcd additionally for cattle in the desert districts (DDP)
- \* One hand pump or standpost for every 250 persons.
- \* The water source should exist within 1.6 kilometres in plains and within 100 metres elevation difference in the hilly areas.
- \* Drinking water is defined as safe if it is free from biological contamination (Guineaworm, Cholera, Typhoid and chemical contamination (excess fluoride, brackishness, iron, arsenic, nitrate, etc.))

**Priorities**

Under ARWSP the following priorities are adopted for implementation of the programme.



- \* To cover no source habitations which have been identified in 1994 survey status report.
- \* To cover habitations with contaminated drinking water (both chemical and biological).
- \* To cover fully all partially covered habitations with water supply of less than 10 lpcd.
- \* To cover partially covered habitations with supply of water between 10-40 lpcd.

Criteria for allocation of funds to States/UTS under ARWSP

The criteria followed for allocation of funds since 1987 are given below :

CRITERIA	WEIGHTAGE (%)
Rural Population	35%
Rural Area	20%
Incidence of poverty	20%
States Under Desert Development Programme (DDP), Hill Area Development Programme (HDAP) and Special category Hill States in terms of	
i) Rural Population	12.5%
ii) Rural Area	12.5%
Total	100%

These allocation are subject to matching provision by States under Minimum Need Programme.

Not with standing the above formula, protected allocations are given the States of Nagaland and Sikkim at 1986-87 level of their allocations, as their allocation for 1997-98 under the above formula works out to be less than that of 1986-87

At least 5% of Annual Plan allocation is earmarked for solving specific problems through Sub-Missions, S & T inputs and R & D activities.





5% of annual plan allocation is earmarked for areas suffering from chronic drinking water problem due to hot and cold desert eco-systems (DDP) districts in the states of Gujarat, Haryana, H.P., J & K and Rajasthan. These allocation are not subject to the matching provision under MNP.

10% ARWSP funds released to the states/UTs are earmarked for operation and maintenance of water supply schemes. This is supplemented by another 10% out of the state sector MNP.

Financial assistance to CAPART is also provided through ARWSP in order to promote participation of voluntary agencies in implementation, O & M of rural water supply systems, mobilising public awareness, etc.

### Provision for SC/ST habitations

ARWSP guidelines provide that the States/UTs have to earmark minimum 25% of outlay for SCs and another 10% for STs for taking up RWS schemes exclusively for SCs and STs. Diversion of funds to other sectors is not permitted. As per ARWSP guidelines, the first source of drinking water has to be provided in SC/ST localities and at the time of implementation of the schemes, coverage of SC/ST habitations should be given first preference and the highest priority so as to ensure that they have easy access to water supply facilities.

This will ensure a large coverage of SC/ST habitations. It may also be mentioned that in March 1990 Central Government released special assistance of Rs. 19.80 crores for coverage of 11000 SC/ST habitations in 9 states. As part of Dr. Ambedkar Centenary Programme, Government of India released further assistance of Rs. 56.70 crore during 1991-92, Rs. 2.234 crore during 1992-93 and Rs. 0.75 crore during 1993-94 to 24 states for coverage of 30000 SC/ST habitations with safe drinking water facilities.

### Mini-Missions

Mini-Missions and sub-missions were the two major innovative approaches introduced with the launching of the Technology Mission. Mini-Missions projects are area based (normally a district), integrating land, water and health related activities aimed at sustainable supply of safe water. Though projects were formulated and arrangements were made for implementation in the field in 55 Mini-Mission Projects (51 districts in 24 States and 4 covering the entire state of Goa and UTs of A & N Islands Lakshadweep and Pondicherry) the desired results could not be achieved in many of these districts.



Sub-Missions

Problems in the drinking water horizon have also been identified and treated through sub-missions to benefit from integrated scientific and technological approaches. These are :

- \* Guineaworm eradication.
- \* Control of fluorosis
- \* Removal of excess iron
- \* Control of brackishness
- \* Scientific source finding, conservation of water and recharging of aquifers
- \* Water quality surveillance

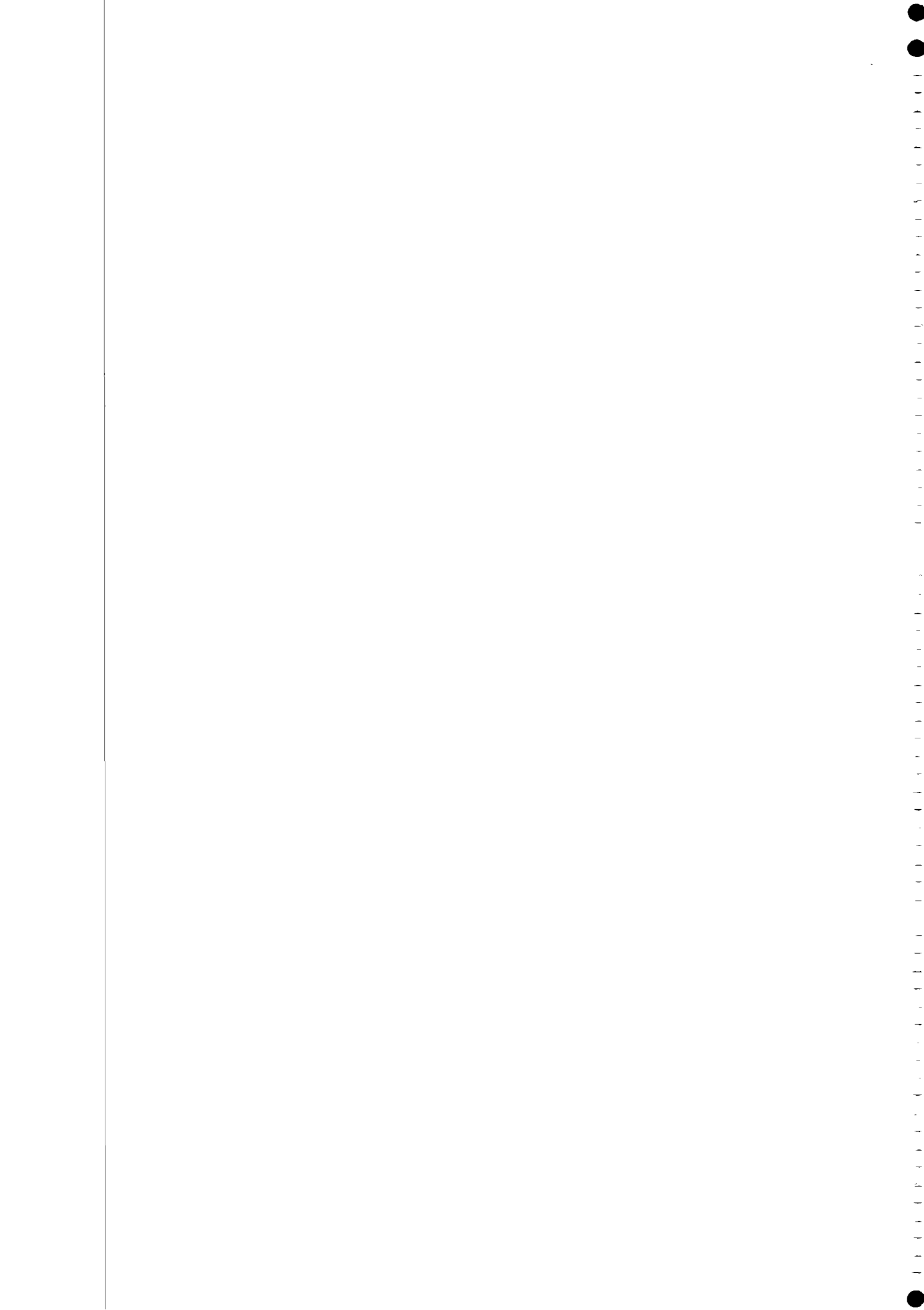
Other programmes :

In addition, emphasis has also been given on the following areas .

- \* Improvement of traditional methods
- \* Purification of water
- \* Improvement of materials and designs
- \* Improvement of maintenance methods
- \* Establishment of management information systems and procedures
- \* Community involvement through panchayats and voluntary agencies
- \* Awareness campaigns
- \* Research and Development
- \* Human Resource Development
- \* Multiateral/Bilateral projects

Allocation of resources under Mini-Missions and Sub-Missions

The entire approved cost of Mini-Mission projects was given as 100% assistance out of mission funds. The entire cost of conversion of step wells into sanitary wells, awareness campaign,



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village contact drives and award for reporting guineaworm affected cases was met as Central assistance. The entire approved cost of treatment plants - desalination, defluoridation and iron removal is met as 100% assistance out of technology mission funds. O & M of desalination plants for three years is met by the central government. The cost of water conservation measures is also met fully by the central assistance. The cost of holding awareness camps, epidemiological surveys and water quality testing cost for control of fluorosis is met by the central government. In regard to water testing laboratories, the non-recurring cost of equipment upto Rs. 1,86,500/- and recurring cost on technical staff, chemicals, etc. for one year, subject to a ceiling of Rs. 1,62,000/- is met as central assistance for each district level laboratory. For mobile laboratories, the entire non-recurring cost of approximately Rs. 13.00 lakh and recurring cost upto Rs. 1,40,000/- for one year was met out of technology mission funds. Since 1993-94, central assistance for sub-missions is being provided as 75% of the approved cost and the remaining 25% being met by the state government. The assistance for district level laboratory has now been revised to Rs. 1 00 lakh for building and Rs. 3.00 lakh for equipment. Recurring cost is shared on 50:50 basis by the centre and states.

The programme is implemented by the states through their PHED/rural development departments, executive directors of mini-mission project areas and other nodal organisations like central mechanical engineering. Research institute, Durgapur, for desalination plant, NIDC for defluoridation and iron removal plants, fluorosis control cell for creation of awareness and holding of awareness camps etc. for control of fluorosis.

### Monitoring of programmes

The implementation of the programme is monitored both at the state government and central government levels in the ministry of rural areas and employment and minimum of programme implementation through monthly, quarterly, half-yearly and annual progress reports. Besides, the progress is also reviewed in the annual review meetings participated by state secretaries and chief engineers incharge of rural water supply programmes. The monitoring covers the following aspects :-- .

- \* Coverage of no-source habitations and partially covered habitations.
- \* Population benefitted separately in general category, SCs and STs
- \* Financial progress under various programme of the mission and MNP.



Coverage of population

The survey of status of water supply facilities in rural habitations undertaken/verified during 1991-94 revealed that against 1991 census 73.06% of rural population was covered as on 1.4.94 and the coverage upto 1.4.97 was 86.74%. Percentage coverage for SC and ST population as on 1.4.97 were 83.39% and 90.21% respectively.

Financial progress

Upto 1996-97 an investment of Rs. 8210.16 crore has been made under Rajiv Gandhi National Drinking Water Mission and an expenditure of Rs. 10,964.49 crore has been incurred under state sector MNP for providing safe drinking water facilities in rural areas. Financial progress under ARWSP (including TM) and MNP during VIIth plan onwards.

Mini-Missions

Projects worth Rs. 227.95 crore were approved under the 55 mini-missions. An amount of Rs. 222.44 crore has been released so far and the expenditure reported is about Rs. 205.68 crore. Against a target for coverage of 20688 villages under the mini-mission, 18410 villages have been reported as covered. State-wise and mini-mission wise details of physical and financial progress.

Progress under sub-missions

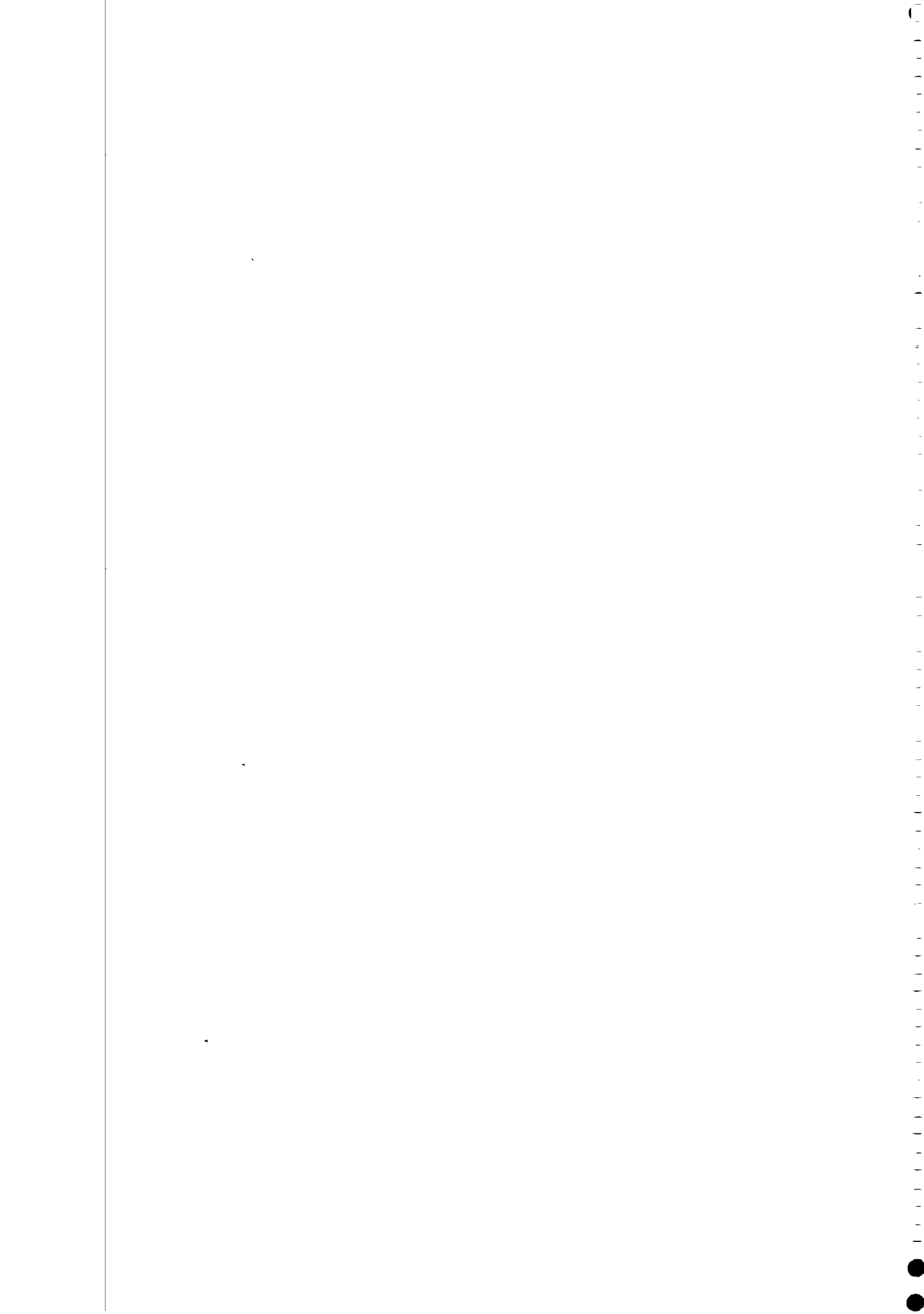
Control of fluorosis

Excess fluoride in drinking water causes dental fluorosis and skeletal fluorosis. The control measures are .

- \* Supply water within permissible limit (1.5 PPM) by providing alternative sources.
- \* Supply defluoridated water and treatment

Excess fluoride in drinking water is prevalent in 10 states and the UT of Delhi 483 defluoridation plants (106 fill and draw and 377 hand pump attached) were approved. 427 plants have been commissioned so far in eleven states

A large number of projects have been approved for safe drinking water supply based on alternative safe sources with 75% central assistance





Control of brackishness

The excess brackishness causes the problem of taste and laxative effects. Control measures include supply of water with total dissolved solids within permissible limits (1500 PPM) by providing alternative sources and supply of water after treatment by desalination. The excess salinity in drinking water is prevalent in 15 states and 2 UTs. Total 194 desalination plants have been approved out of which 150 plants have been commissioned so far.

Removal of excess iron

Excess iron causes corrosion of tube wells, water supply installations and encourages growth of iron bacteria. The control measures are supply of water within permissible limit (1.0 PPM) by providing alternative sources and supply of water after treatment.

The problem of excess iron is prevalent in 15 states and one UT. Setting up of total 16316 iron removal plants was approved out of which 9227 plants have been commissioned so far.

Guineaworm eradication

Guineaworm is a water born disease. The main control measures are; abolition of step-wells and provision of sanitary wells, tube wells or piped water supply. No guineaworm case has been reported in 1996-97. India has now approached the international commission for certification of dracunculiasis eradication.

Solar photovoltaic pumping system

Against 425 systems approved, total 225 systems have been installed so far.

Water quality testing laboratories

Out of total 341 stationary laboratories sanctioned, 194 have been set up in various states. Besides, 22 mobile laboratories have also been established. The state-wise details of water quality testing laboratories.



Conservation of water

Projects with Rs. 28.222 crores were approved for conservation of water and water harvesting structures. The total amount released so far is Rs. 24.637 crores. Expenditure reported so far is Rs.19.83 crores. Though the funds were released during the period 1987-88 to 1994-94, the utilisation of funds and implementation of the schemes is some what slow.

Operation and maintenance of rural water supply schemes

A national workshop was held in September, 1996 on the operation and maintenance of rural water supply schemes with the active involvement of community and panchayati raj institutions with a view to evolving policy for the ninth five year plan. The recommendations of the workshop have been endorsed by the states in the third meeting of the empowered committee of Rajiv Gandhi National Drinking Water Mission held on 24.10.96.

Central Rural Sanitation Programme

The Centrally Sponsored Rural Sanitation Programme (CRSP) was launched in 1986 with the objective of improving the quality of life of the rural people and to provide privacy and dignity to the women. This was intended to supplement the efforts of the States. The programme provided for 100% subsidy for construction of sanitary latrines for Scheduled Castes, Scheduled Tribes and landless labourers and subsidy as per the rate prevailing in the States for the general public. The guidelines of the programme were circulated to the States in 1986.

Based on the feed back received on implementation of the programme from the states, UNICEF and voluntary organisations, the programme was revised by the Government of India in March 1991.

The programme has since been further revised based on the recommendations of the National Seminar on Rural Sanitation in September, 1992, and the strategy outlined in the Fifth Five year plan. The revised programme aims at generation of felt need and peoples participation

The concept of sanitation also include personal hygiene, home sanitation, safe water, garbage disposal, excreta disposal and waste water disposal. The national sanitation programme covers all these with appropriate emphasis on each. However the main emphasis of Central Rural Sanitation Programme (CRSP) introduced in October 1986 has been on excreta disposal.



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The guidelines for CRSP were first issued in November, 1986 & were revised in March, 1991, CRSP has been again revised in March, 1993. The guidelines now being issued are based on the revisions made. These are only in the nature of general guidelines. In due course technical details and guidelines on various types of sanitary latrines would be compiled and send to the states and implementing agencies for their use and guidance. One such guideline on Twin Pit Pour flush latrines brought out recently by Ministry of Urban Development and UNDP/World Bank is being distributed. Implementing agencies should use standards, specifications and guidelines of recognized technical quality, while grounding the programme.

**NEED FOR THE PROPOSED STUDY**

The Rajiv Gandhi National Drinking Mission is responsible for ensuring facilities for safe drinking water supply and sanitation in the rural areas. Substantial resources have been invested to provide these facilities. As per the statistics of the Ministry, at present, more than 96% of the rural population has been provided access to safe drinking water.

To make an overall assessment of the successes achieved and failures there of with the reasons, the Mission has decided to commission studies on an all India basis to get the first hand feel through outside professional agencies & thus this study is entrusted to M/S Santek Consultants Pvt. Ltd.



CHAPTER - II

STUDY DESIGN AND IMPLEMENTATION

OBJECTIVES OF THE STUDY

The main objectives of this study are as follows :

- i) To assess the present coverage status of rural water supply and sanitation with a special emphasis on the coverage of backward classes/areas.
- ii) To evaluate the safe water supply coverage in areas where quality of drinking water was a major problem.
- iii) To monitor and evaluate peoples' response and perceptions about the coverage of rural water supply and sanitation to evaluate the community involvement in the planning and implementation of water supply schemes.
- iv) To investigate the operation and maintenance status of water supply schemes.
- v) To monitor and evaluate contribution by the users in capital and recurring cost on rural water supply schemes.
- vi) To monitor current knowledge, attitude, practice of villagers on water supply.

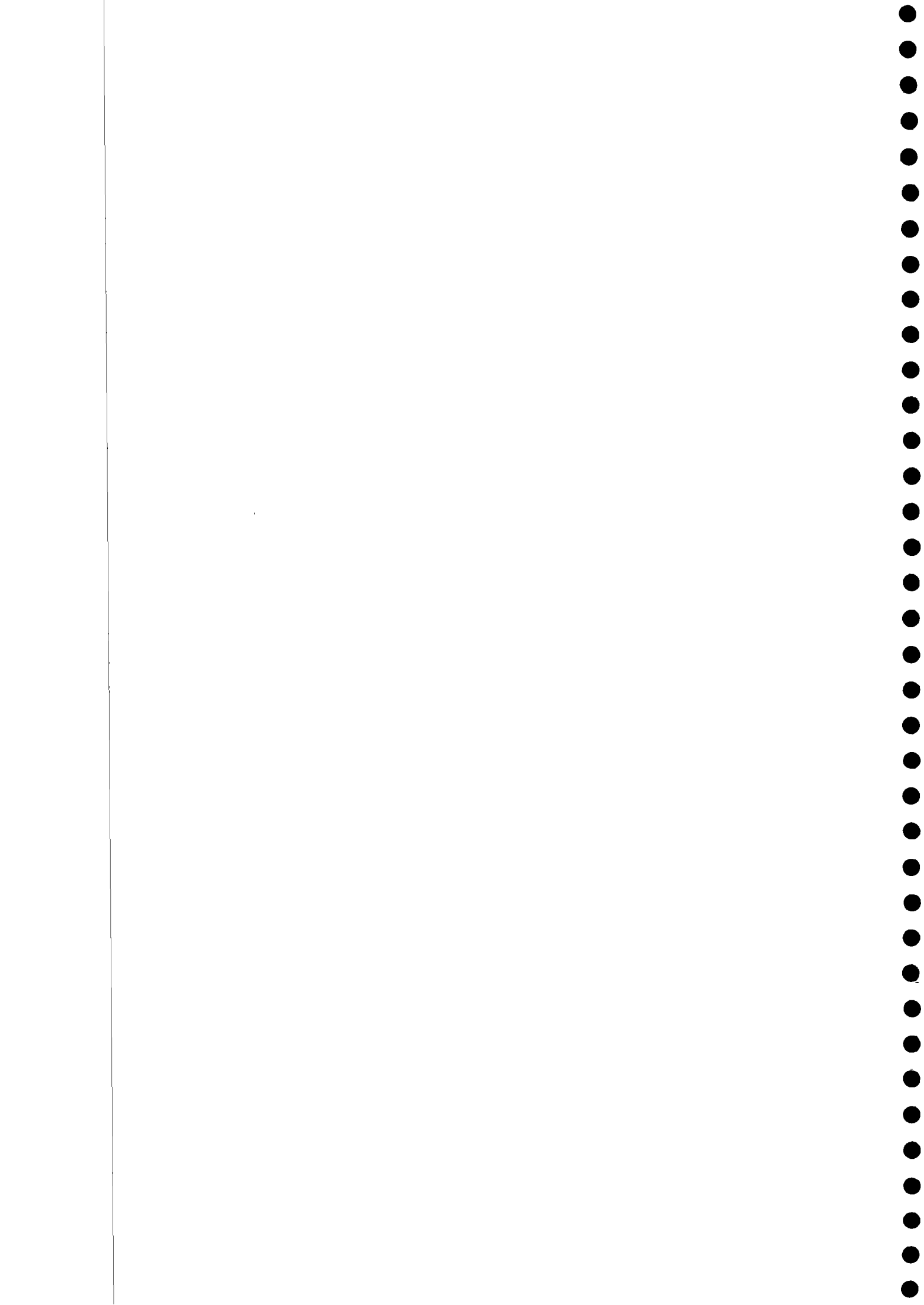
STUDY DESIGN & METHODOLOGY

For the collection of data a multipronged strategy was followed as it was required to collect secondary as well as primary data. The strategy encompassed the use of the following techniques for data collection.

Secondary data Collection

The secondary data was collected from different departments as mentioned below :

- \* Ministry of Rural Development
- \* Public health engineering department.
- \* State rural development department.





- \* Village panchayat.
- \* Other concerned offices.
- \* Village pradhans
- \* Census office, etc. on the following aspects mainly :
  - No. and types of water supply system set up.
  - Coverage of villages under the CRSP
  - Location of system set up.
  - The categorization wise list of FC, PC and NC villages.
  - Procedures for operation and maintenance, etc.
  - Population and expected growth trends, etc.
  - NC, PC, FC status of selected villages (the copy of this is attached along with this report as received from the concerned office as Annexure - I).

#### Primary Data Collection

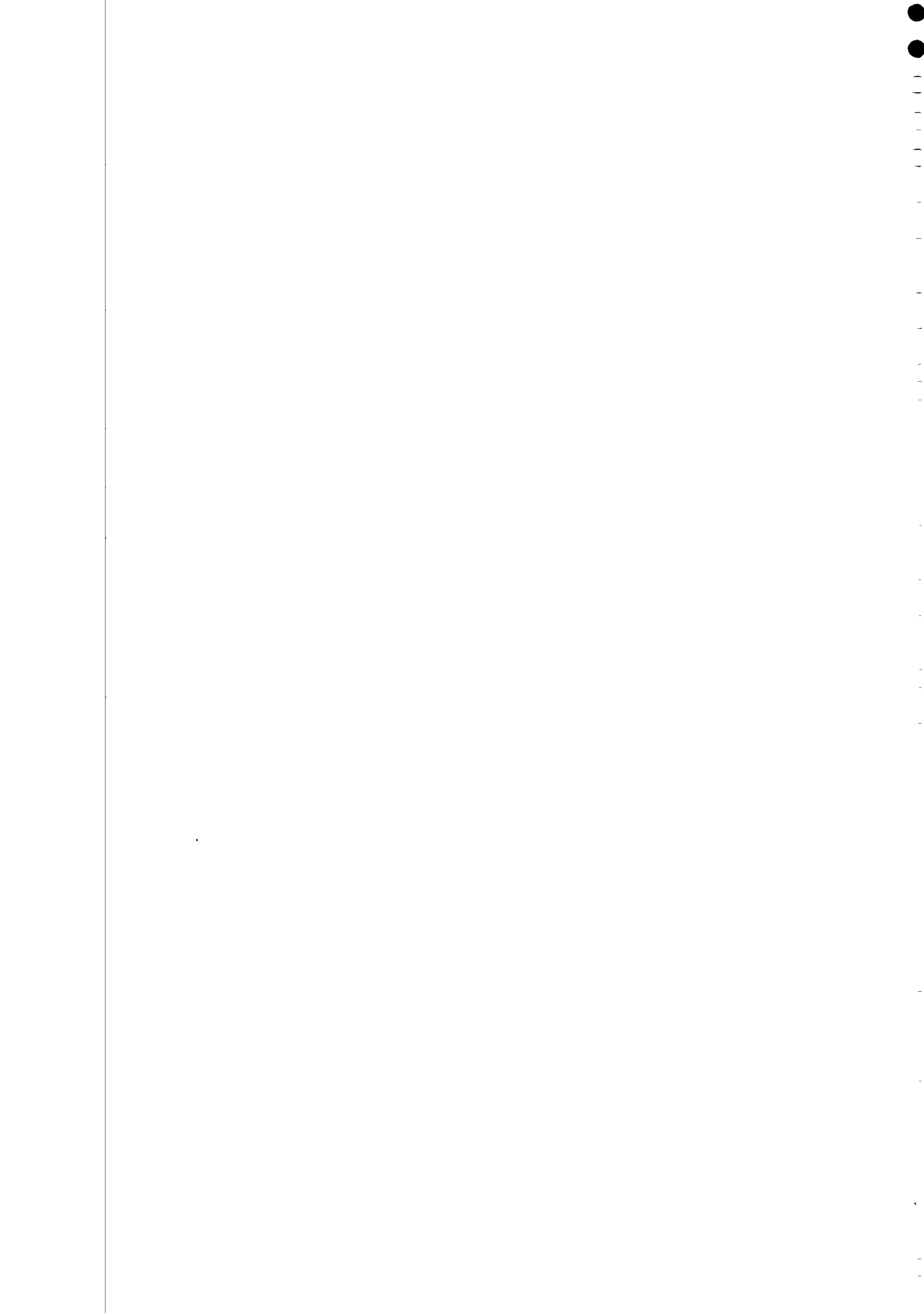
Primary data was collected mainly using a structured questionnaire during field survey and also through group discussions and informal interviews.

#### Group Discussion

Group discussions with selected villages as well as some panchayat members & village pradhans were held in different places to elicit their views about the water supply and sanitation scenario.

#### Field Survey

Survey was conducted in the selected households of the sampled selected villages and blocks of the 4 districts of Bihar namely Samastipur, Gaya, Dumka & Gumla through interview using prestructured questionnaire administered by personal contact during field visits.



Sampling frame and procedure

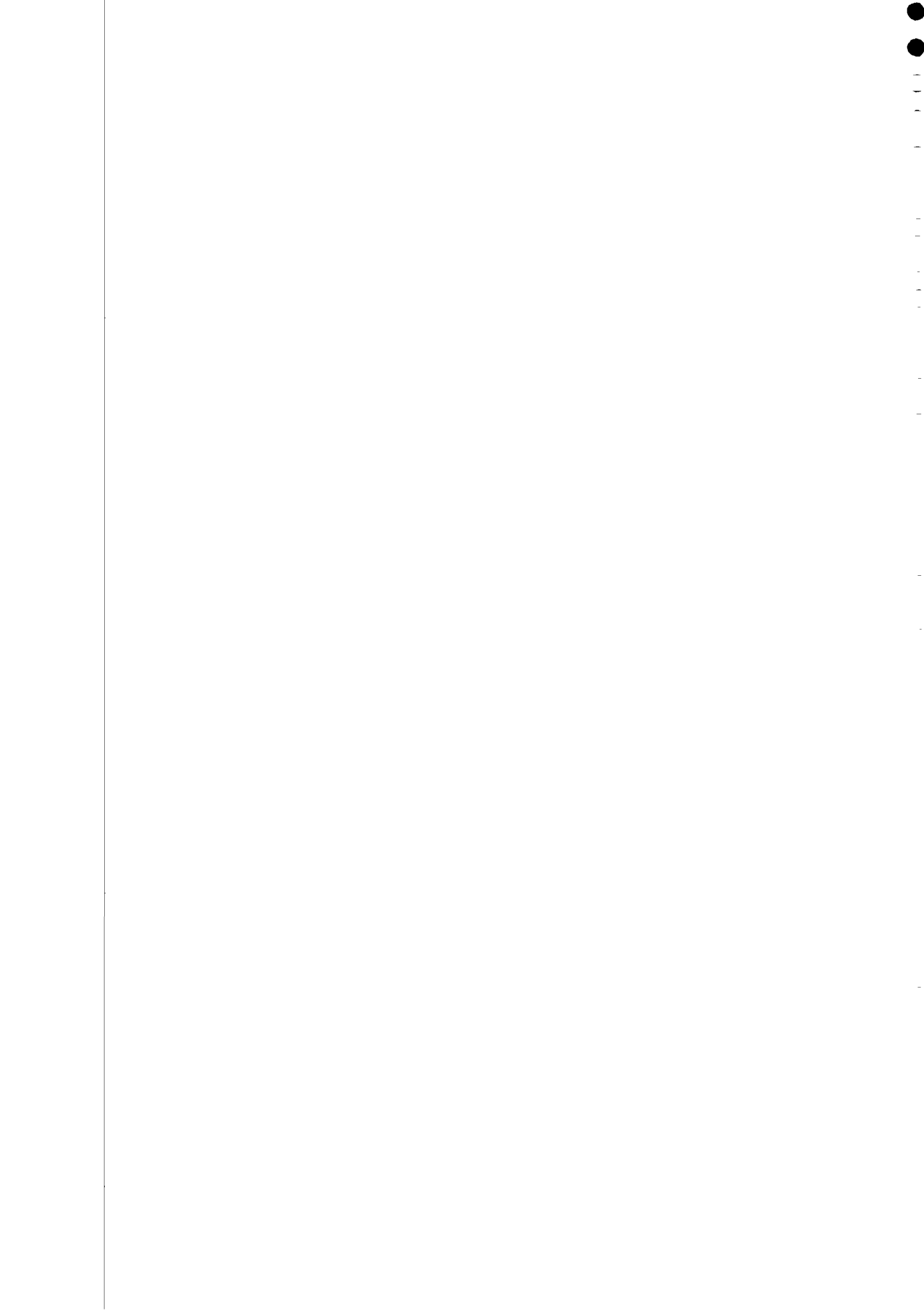
Four districts were selected from Bihar for data collection one each from East, West, Central and North Bihar. One district each from the north Bihar and central Bihar are selected on the criteria of maximum population and one district each from east and west Bihar are selected having maximum number of SC/maximum number of SC/ST respectively in consultation with the mission. The districts thus selected were Samastipur from north Bihar, Dumka from east Bihar, Gaya from central Bihar and Gumla from west Bihar. For selection of the blocks all the blocks in respective districts were categorized or stratified into 3 groups based on population i.e. group I comprising of blocks with lower population, Group II consisting of blocks with medium population and Group III consisting of blocks with higher population except in district Dumka in which the blocks are divided into two groups with lower & higher population as shown in exhibit 2.1. One block was selected from each group except in district Dumka where 2 blocks are selected from one group and one from the other group. Thus a total of twelve blocks were selected. The list of selected blocks as shown in Exhibit No. 2.2.

5 villages were selected using cluster/random sampling from each block, thus totalling to 15 villages per districts as shown in Exhibit 2.2. 15-20 households were selected from each village for data collection depending on the population. As per the guidelines of the mission about 15-20 households were to be surveyed from each of the selected villages for primary data collection.

Training of investigators

The selected investigators were thoroughly and adequately trained using participatory approach and demonstrations. The main idea was to brief them about the objectives of the study and discuss the schedule. Hence they were given inputs mainly on :

- \* Information about the objectives of the project/study.
- \* Information about the need of the present study.
- \* Instructions for interviewing and filling up of the schedules.
- \* Eliciting correct information.
- \* Methods for consistency and validity checks, etc.



Pre-testing

The schedule for primary data collection was pre-tested and necessary modifications were made thereafter. The schedules were then finalized after discussion and consultation with the concerned officials of the Mission in the Ministry. A copy of the final schedule is attached along with this report as Annexure - II (English) and Annexure - III (Hindi).

Data collection

Successful contacts were made with 1049 households from the selected 61 nos. villages of the 12 nos. selected blocks of the four districts in Bihar.

DATA TABULATION & ANALYSIS

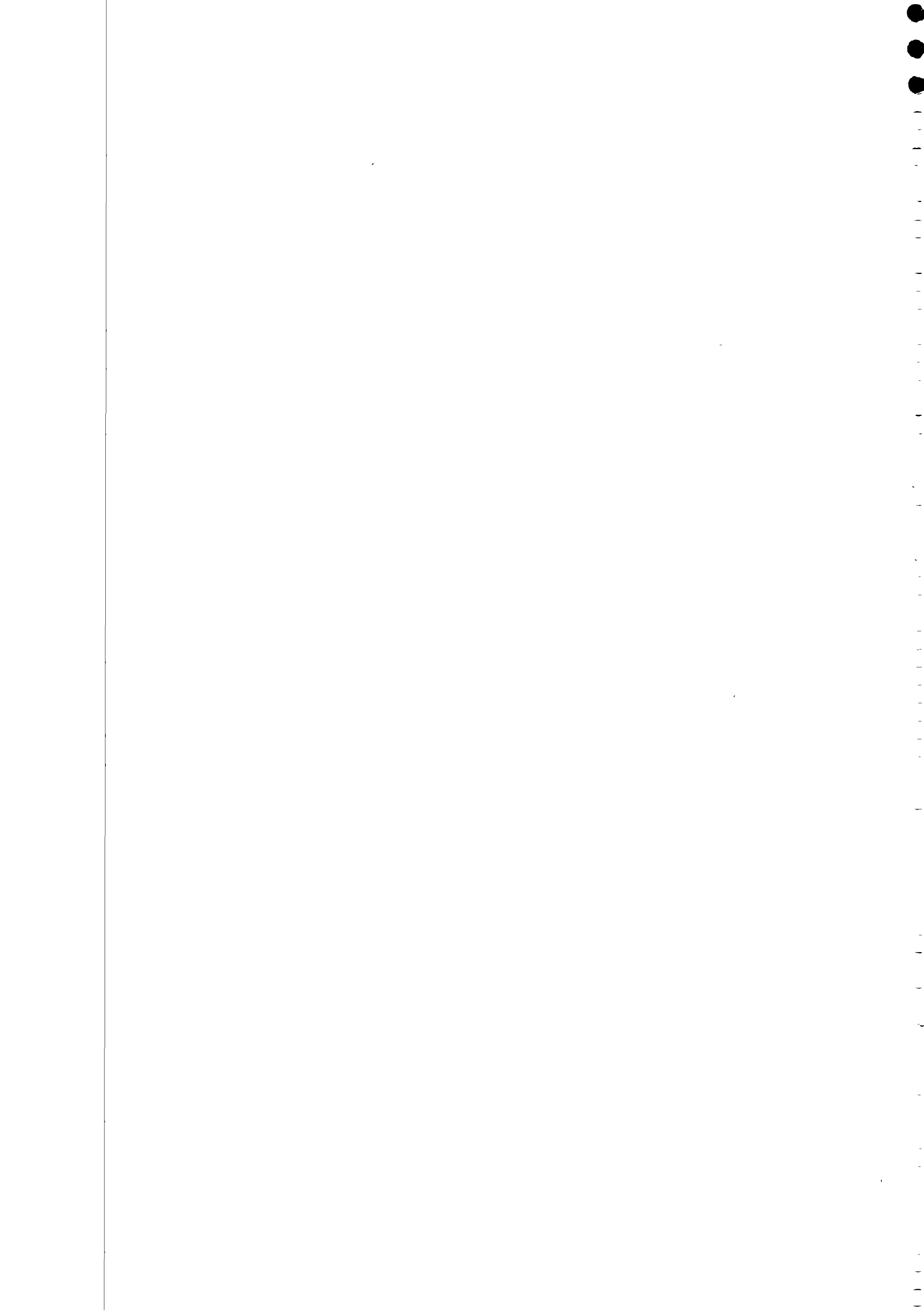
Tabulation formats were designed/prepared keeping in view the desired output requirements. Data from the filled up schedules were fed in to the computers on a specially designed software package for tabulation & analysis using proper consistency checks, etc. The tabulated data was analyzed based on different variables and the results interpreted there on. The survey findings are given in the third chapter of this report.



EXHIBIT NO. 2.1

CATEGORIZATION OF BLOCKS IN SAMPLED DISTRICTS  
IN POPULATION CRITERIA

DISTRICT	GROUP NO.	NAME OF BLOCKS	POPULATION
SAMASTIPUR	I	1. Sarai Ranjan	2870
		2. Mohudin Nagar	8846
		3. Singhiya	10290
		4. Patori	12029
	II	1. Bibhutipur	16420
		2. Rosara	23413
		3. Hasanpur	24390
		4. Ojiyarpur	37042
		5. Sama	37304
	III	1. Pusa	43475
		2. Kalyan	43648
		3. Morwa	60668
		4. Dalsinghsarai	65852
		5. Warisnagar	93570





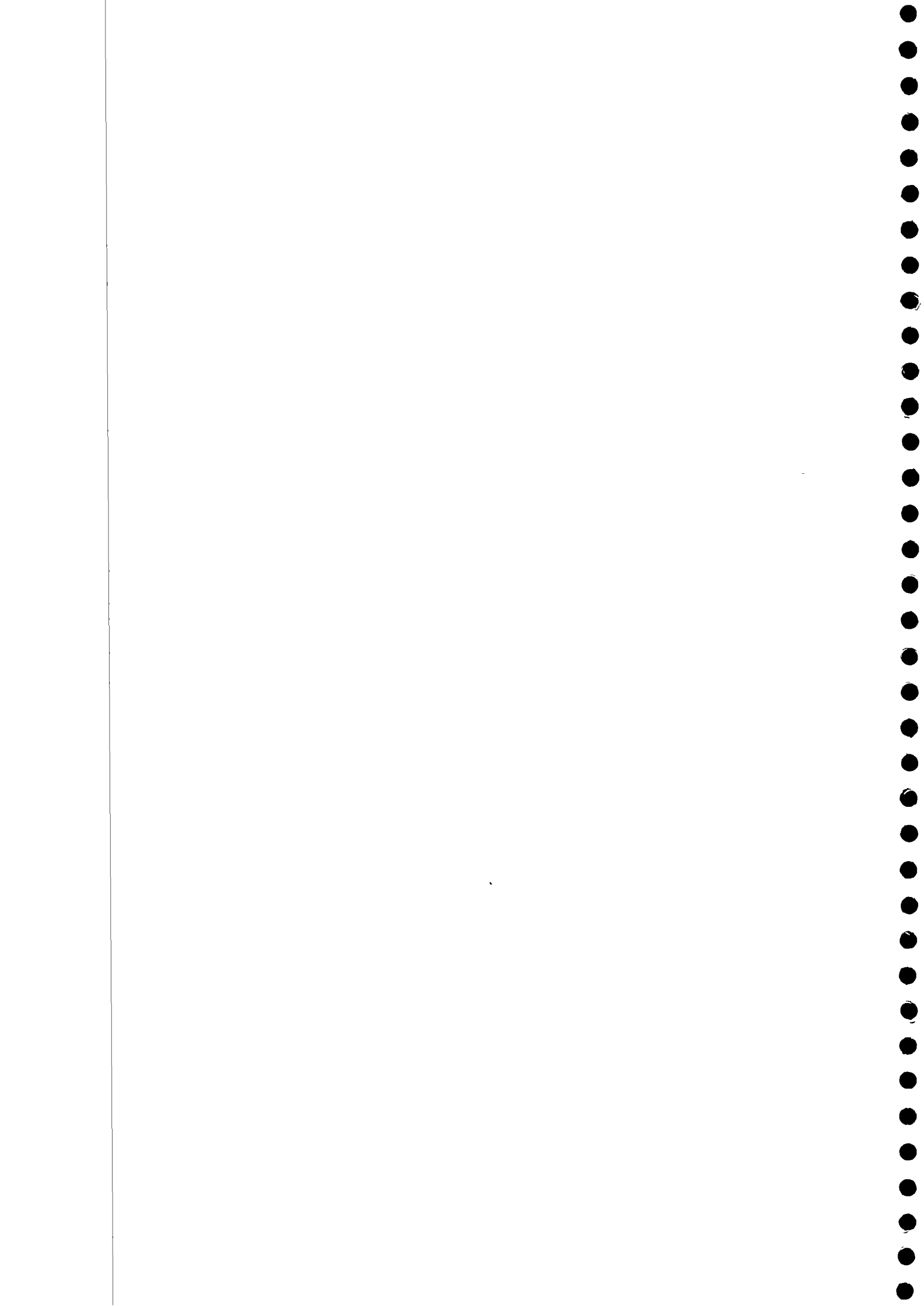
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DISTRICT	GROUP NO.	NAME OF BLOCKS	POPULATION
GUMLA	I	1. Bharno	5535
		2. Bishunpur	6166
		3. Ghaghara	6507
		4. Kamdara	7464
	II	1. Basia	10441
		2. Chainpur	12359
		3. Raidih	14080
		4. Gumla	14500
	III	1. Palkot	20294
		2. Sisai	21233
		3. Dumri	23323



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DISTRICT	GROUP NO.	NAME OF BLOCKS	POPULATION
DUMKA	I	1. Kundhit	3498
		2. Narainpur	5718
		3. Jamtara	13135
		4. Nala	41520
	II	1. Raneshwar	50418
		2. Saraiyahat	65356
		3. Jarmundi	66655
		4. Ramgarh	87038
		5. Jama	88784



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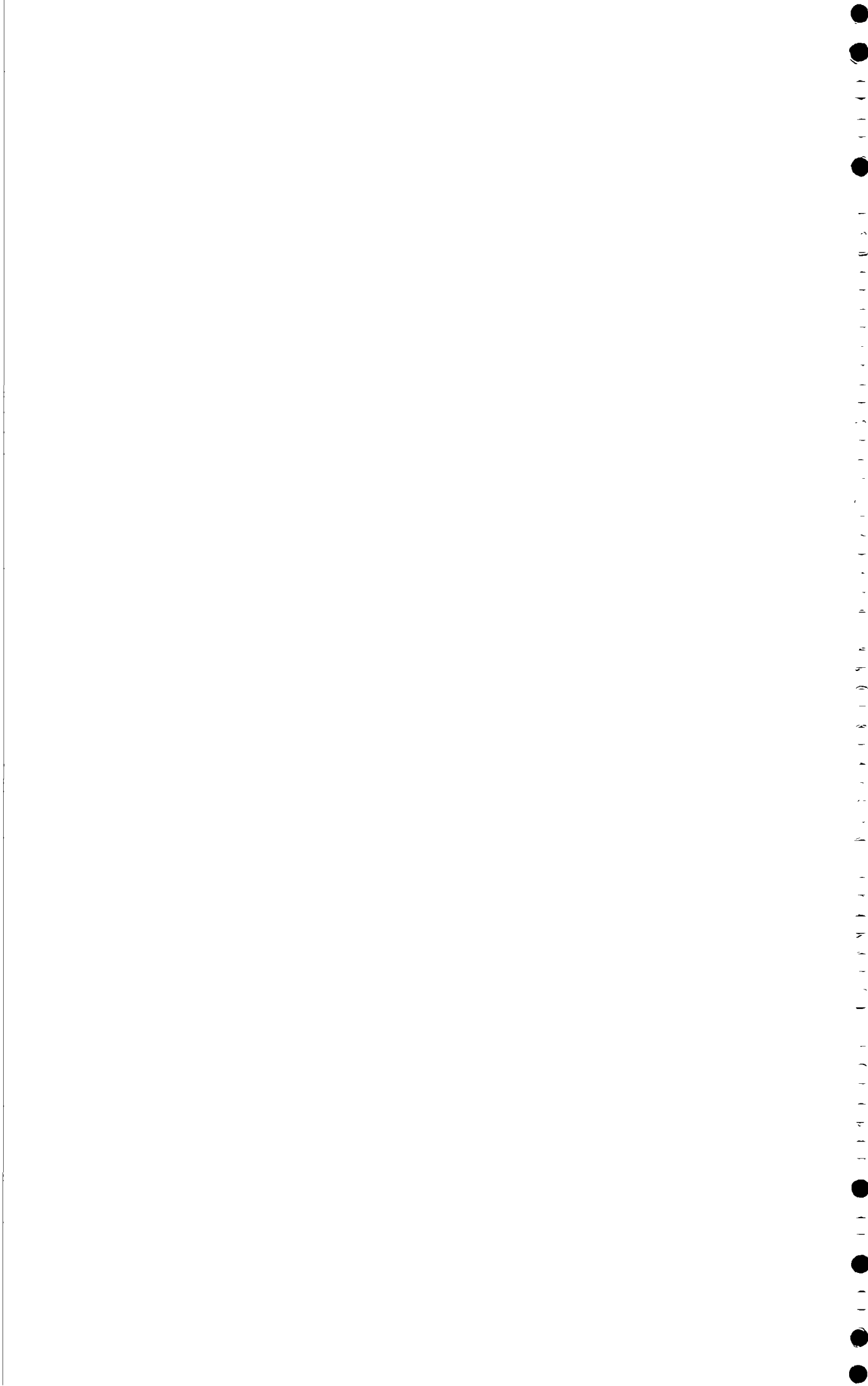
DISTRICT	GROUP NO.	NAME OF BLOCKS	POPULATION
GAYA	I	1. Bodh Gaya	1539
		2. Gurua	3505
		3. Amas	4945
		4. Dumariya	5938
		5. Manpur	7254
		6. Konch	11940
	II	1. Townblock	14128
		2. Paraiya	16301
		3. Sherghati	17021
		4. Imanganj	20098
		5. Tekari	21185
		6. Mohanpur	24755
	III	1. Baraihatti	26211
		2. Khjer Saran	27305
		3. Belanganj	31896
		4. Fatehpur	39258
		5. Wazirganj	53260
		6. Atari	61479



EXHIBIT NO. 2.2

LIST OF SELECTED BLOCKS AND VILLAGES

DISTRICTS	BLOCKS	VILLAGES
SAMASTIPUR	Singhiya	Salepur, Lagma, Agraul, Jahangerpur, Bishunpurdiha
	Rosera	Panchgawa, Shahpur, Pabra, Bharwari, Harpur
	Dalsinghsara	Pandha, Pagra, Mathurapur, Harshankarpur, Chakbahudeen
GUMLA	Bharno	Khatko, Chetto, Dumbo, Parsa, Khumbro
	Gumla	Armai, Phasiya, Tarri, Dumadih, Pugu
	Sisai	Sisai, Darha, Nimra, Gurgaon, Kudra
DUMKA	Kundhit	Kalipath, Deuli, Lakhnyabad, Pathorabad, Kundhit
	Nala	Bairagidih, Dabar, Dumariya, Dighariya, Sangajouri
	Raneshwar	Chakpathar, Hatkadma, Karikadar Kuchiyadal, Pathughallu
GAYA	Bodh Gaya	Motichak, Sekhwara, Jguana, Majhuli, Bara, Turikhurd
	Paraiya	Bodh paraiya, Bohera, Konetis, Tilori, Barma
	Wazirganj	Eru, Khiryanwa, Dhikhingawan, Sahiya, Punawan





CHAPTER-III

SURVEY FINDINGS

PART - A

The survey findings of this study are presented in two parts. The first part consists of consolidated findings for the whole state i.e. for all the four selected districts including the demographic data collected. In the second part the important/significant findings of each district have been discussed and presented individually.

Survey was conducted in four districts of Bihar namely Samastipur, Gaya, Gumla and Dumka. 15-20 households were surveyed in each district. Successful contacts could be made with a total no. of 1049 households from these four districts of Bihar. The survey findings for the state as a whole are as follows :

Caste

Out of the total 1049 households surveyed about 17.44% were scheduled castes, 21.06% were scheduled tribes, 39.56% were belonging to other backward categories, 16.77% households were belonging to the general category and 5.17% households were belonging to some other castes. (Refer Table No. 3.1 also).

TABLE NO 3.1

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO CASTE

CASTE	SC	ST	OBC	GENERAL	OTHERS	TOTAL
NO. OF HOUSEHOLDS	183	221	415	176	54	1049

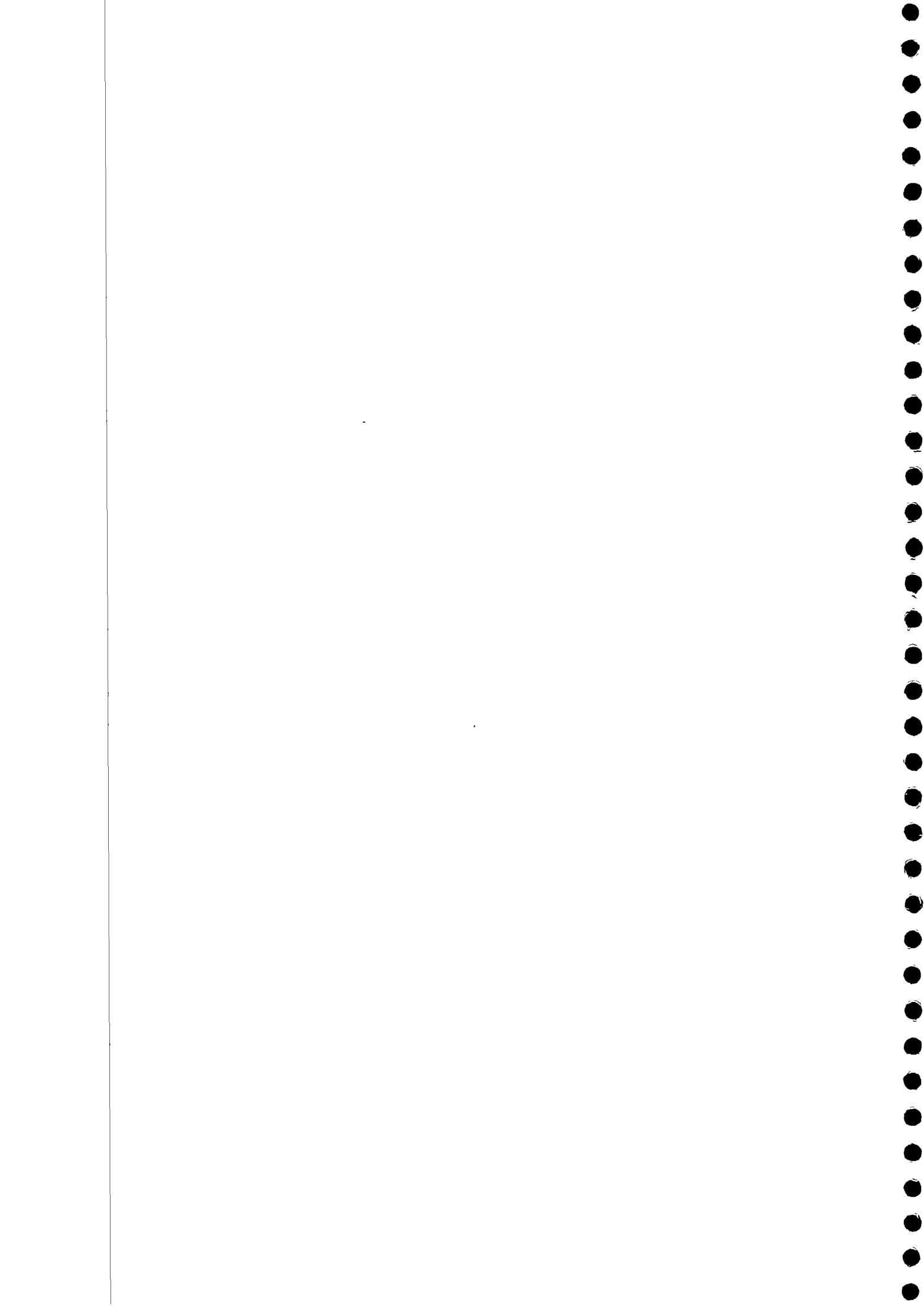
Family Occupation

61.96% respondents were farmers, 22.68% were landless labourers, 2.66% were artisans, 3.33% were in service and 9.34% were having their own business like own shops, cottage industries, etc (Refer Table No.3.2 also).

TABLE NO. 3.2

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO OCCUPATION

OCCUPATION	FARMERS	LANDLESS LABOURER	ARTISANS	SERVICE	OTHERS	TOTAL
NO. OF HOUSEHOLDS	650	238	28	35	98	1049



### Family members

Out of the total 1049 nos. households surveyed, 4.19% households have 1-2 family members, 15.63% households have 3-4 family members, 25.64% households have 5-6 family members, 18.2% households have 7-8 family members & 36.32% households have more than 8 family members. (Refer Table No.3.3 also).

TABLE NO. 3.3

#### DISTRIBUTION OF HOUSEHOLDS ACCORDING TO FAMILY MEMBERS

FAMILY MEMBERS	1-2	3-4	5-6	7-8	>8	TOTAL
NO. OF HOUSEHOLDS	44	164	269	191	381	1049

### Earning members in the family

Out of the total 1049 nos. households surveyed, 78.07% households have 1-2 earning members, 18.39% households have 3-4 earning members, 2.76% households have 5-6 earning members, 0.38% households have 7-8 earning members and 0.38% households have more than 8 earning members in their family. (Refer Table No. 3.4 also).

TABLE NO. 3.4

#### DISTRIBUTION OF HOUSEHOLDS ACCORDING TO TOTAL EARNING MEMBERS

EARNING MEMBERS	1-2	3-4	5-6	7-8	>8	TOTAL
NO. OF HOUSEHOLDS	819	193	29	4	4	1049

### Income

49.95% households have an income of less than Rs. 1000/-, 20.11% households have an income in between Rs. 1001/- to Rs. 2000/-, 17.44% households have an income in between Rs. 2001/- to Rs. 3000/-, 6.76% households have an income in between Rs. 3001/- to Rs. 4000/-, 3.24% households have an income in between Rs. 4001/- to Rs. 5000/-, 1.52% households have an income in between Rs. 5001/- to Rs. 6000/-, 0.19% households have an income in between Rs. 6001/- to Rs. 7000/-, 0.19% households have an income in between Rs. 7001/- to Rs. 8000/-, 0.19% households have an income in between Rs. 8001/- to Rs. 9000/-, 0.19% households have an income in between Rs. 9001/- to Rs. 10000/- and 0.38% households have an income above Rs. 10,000/-. (Refer Table No. 3 5 also).



TABLE NO. 3.5

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO INCOME

INCOME	<1000	1001-2000	2001-3000	3001-4000	4001-5000	5001-6000	6001-7000
NO. OF HOUSEHOLDS	524	211	183	71	34	16	2

Per Capita requirement of water

**For cooking and drinking**

Out of the total 1049 nos. households surveyed it is reported that the per capita daily requirement of cooking and drinking for 30.79% households is 0-10 litres of water, for 33.84% households is between 10-20 litres, for 12.86% households is between 20-30 litres, for 15.91% is between 30-40 litres, for 4.48% households is between 40-50 litres, for 2.09% households is between 50-90 litres of water. (Refer Figure No. 3.1).

**For washing**

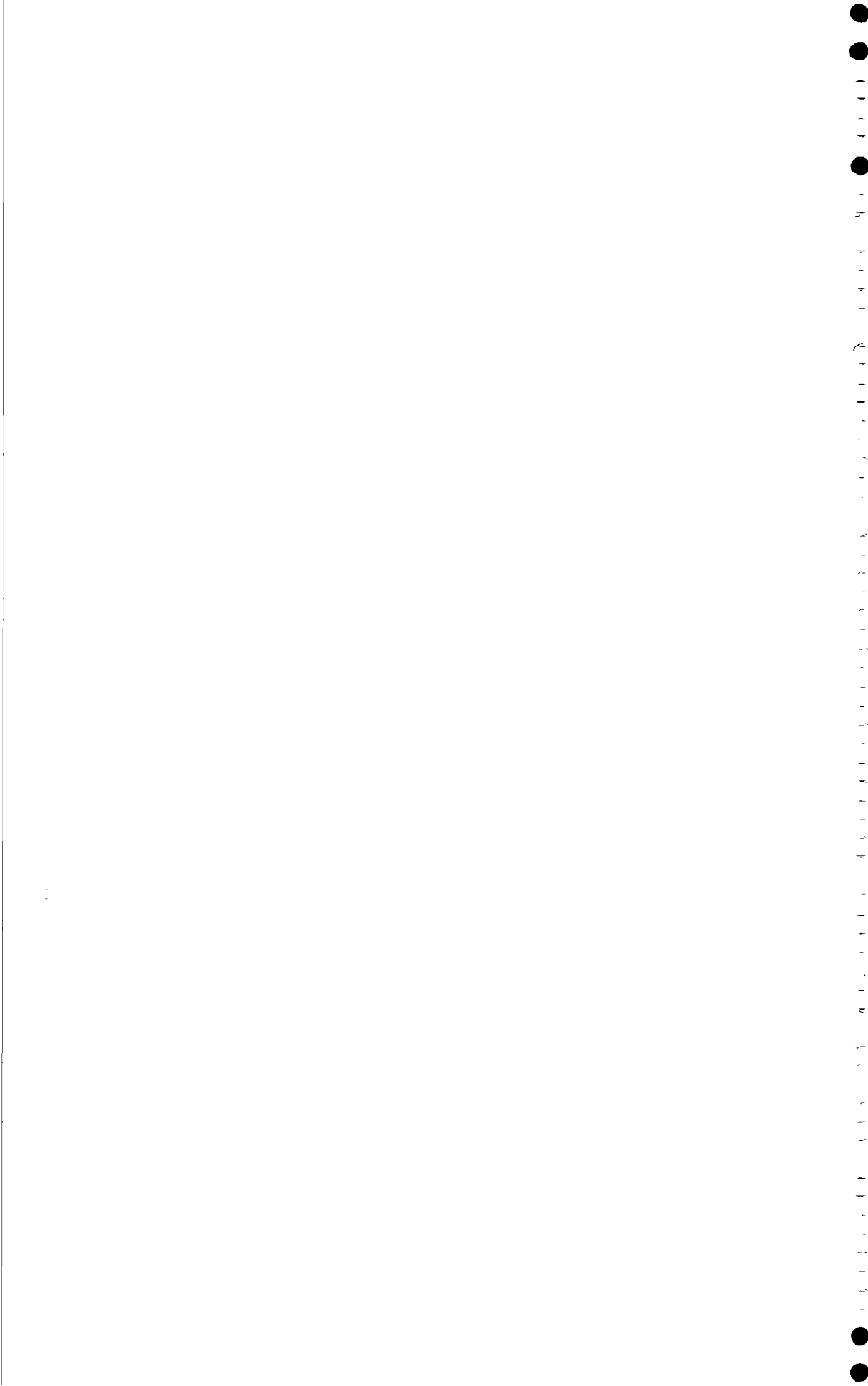
Out of the total 1049 nos. households surveyed it is reported that the per capita daily requirement for washing purpose of 6.48% households is upto 10 litres of water, for 23.35% households is between 10-20 litres, for 31.17% households is between 20-30 litres, for 16.11% households is between 30-40 litres, for 10.2% households is between 40-50 litres, for 9.91% households is between 50-80 litres and for 2.76% households is between 80-150. (Refer Figure No. 3.2).

**Total per capita requirement of water for cooking and washing**

The total per capita requirement of water for both cooking/drinking and washing clothes, etc. for 10.76% households is upto 20 litres, for 20.49% households is 20-30 between litres, for 25.92% households is between 30-40 litres, for 10% households is between 40-50 litres, for 5.14% households is between 50-60 litres, for 5.91% households is between 60-70 litres, for 3.71% households is between 70-80 litres, for 5.62% households is between 80-90 litres, for 4.38% households is between 90-100 litres & for 7.97% households is more than 100 litres of water. (Refer Figure No. 3.3).

Requirement of water for animals

4.76% households have reported that they require 50 litres of water daily for their animals, 14.2% households have reported that they require 50-100 litres of water daily, 15.63% households have reported that they require 100-150 litres of water daily,



11.72% households have reported that they require 151-200 litres of water daily, 7.14% households require 201-250 litres of water daily, 4.38% households require 251-300 litres of water, 1.71% households require 301-350 litres of water, 1.52% households require 351-400 litres of water daily, 1.71% households require 401-450 litres of water, 1.23% households require 451-500 litres of water and 3.05% households require more than 500 litres of water daily for animals. (Refer Table No.3.6 also).

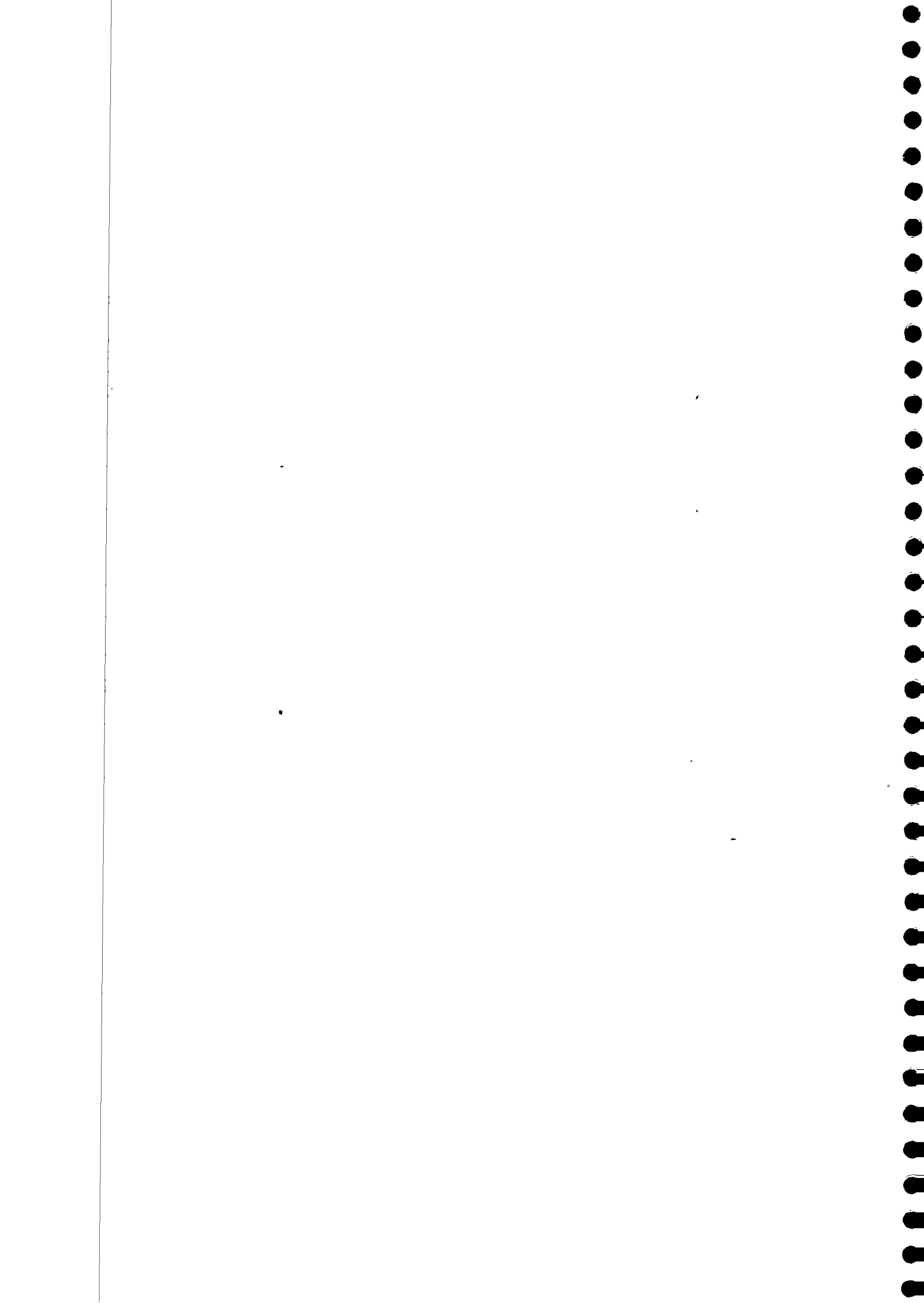
67.05  
TABLE NO. 3.6

DISTRIBUTION ACCORDING TO PER CAPITA REQUIREMENT OF WATER

<u>PER CAPITA REQUIREMENT</u>	<u>COOKING &amp; DRINKING</u>	<u>FOR WASHING</u>	<u>TOTAL</u>
0-10	323	68	10
10-20	355	245	103
20-30	135	327	215
30-40	167	169	272
40-50	47	107	105
50-60	1	26	54
60-70	40	33	62
70-80	15	45	39
80-90	2	5	59
90-100	-	11	46
100-110	-	3	14
110-120	-	2	22
120-130	-	2	15
130-140	-	4	2
140-150	-	2	16
>150	-	-	15

Sanitation

Majority of the villagers were unaware of the concept of sanitation and the importance of it. Because of poverty and illiteracy and lack of awareness they are not taking care of





proper sanitation and personal hygiene. No one used to keep their house clean. There is no particular place for garbage disposal. So they put cowdung and garbage in the surroundings of their houses. Many of them were using well water for drinking purpose without caring whether it is safe or not. In many wells the water was found dirty. There is no proper drainage system in many of the villages for the disposal of waste water. In some villages there are small channels around the water source for disposal of waste water.

There is no proper toilet system in many villages of Bihar. More than 90% villagers were using open field and banks of rivers for defecation. No provision of public toilets were there. Only very few families have their own toilets. Because of all these majority of the villagers maintain poor health standards.

#### Status of Hygienic Conditions around Water source

The villagers were asked whether hygienic condition is maintained around the water source or not. As majority of the villagers were unaware of the concept of hygiene, 83.6% households have reported that hygienic condition is maintained around the water source and 16.39% households have reported that hygienic condition is not maintained around the water source.

Out of the 16.39% households who felt that hygienic condition is not maintained around the water source, 59.3% households felt that it is because of the absence of proper drainage system, 34.88% households felt that it is because necessary repairs are not done, 11.04% households felt that it is because cleanliness is not maintained properly, 6.97% households felt that it is because the location is not proper & 5.81% households felt that it is because of some other reasons.

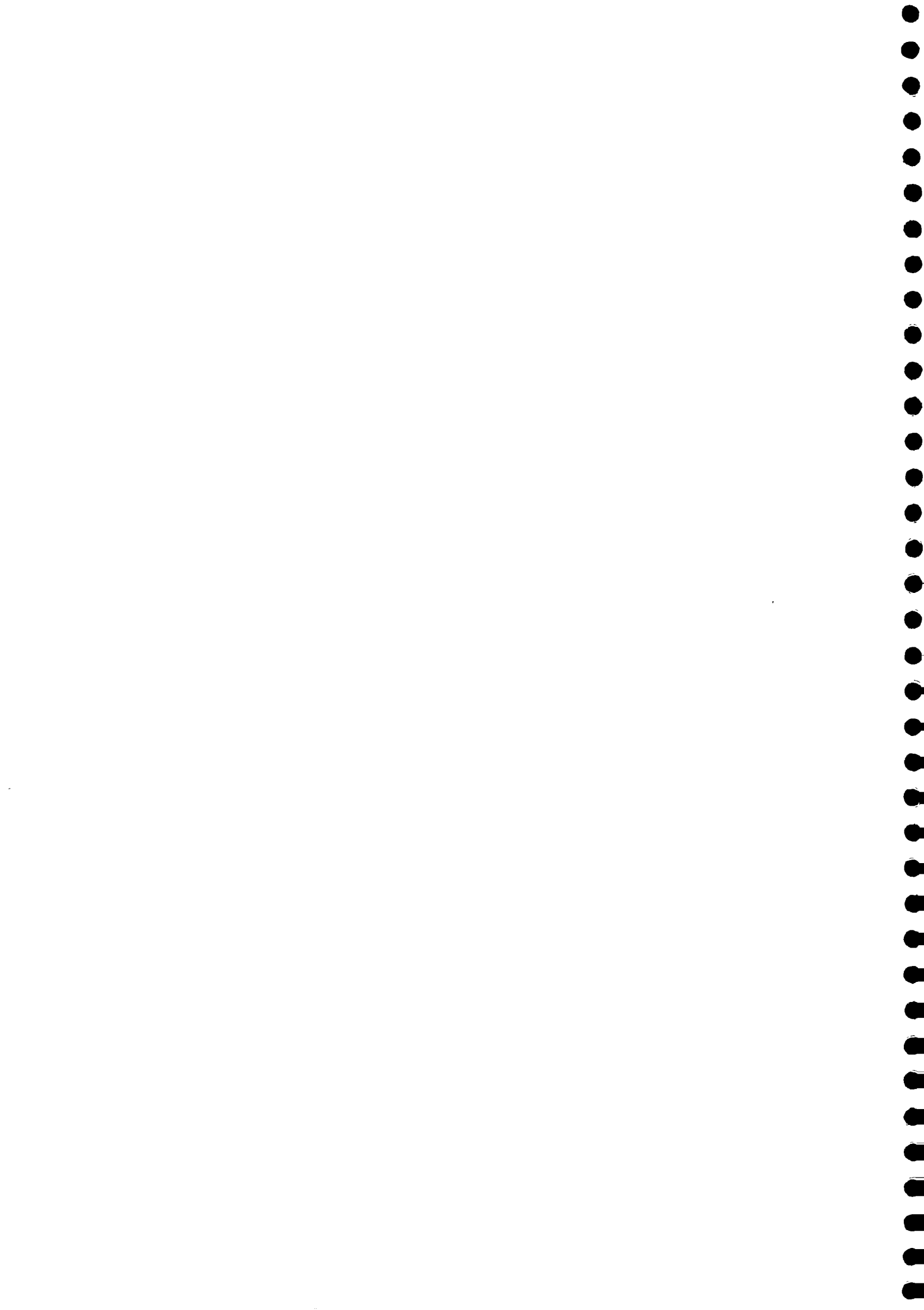
#### Sources of water supply before rural water supply programme

##### Sources for cooking & drinking

Out of the total 1049 households surveyed, 63.77% households have reported that they used to fetch water from the community well, 18.68% households have reported that they used to fetch water from their own well, 0.66% households have reported that they used to fetch water from pond, 0.57% households have reported that they used to fetch water from rivers and 20.59% households have reported that they used to fetch water from other natural sources like springs. Some of them used more than one source.

##### For washing clothes

62.44% households have reported that for washing clothes they used the water from the community well, 18.68% households have reported that they used the water of their own well, 13.72% households have reported that they used the water from the pond, 0.19% households have reported that



they used the water from the lake, 3.43% households have reported that they used the water from river and 20.11% households have reported that they used the water from other natural sources. Some of them used more than one source.

**For animals**

29.64% households have reported that for animals they used the water from the community well, 14.68% households have reported that they used the water of their own well, 22.68% households have reported that they used the water from the pond, 1.04% households have reported that they used the water from the lake, 9.24% households have reported that they used the water from river and 16.77% households have reported that they used the water from other sources for this purpose. Some of them used more than one source. (Refer Table No. 3.7 also).

TABLE NO. 3.7

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO SOURCES OF WATER SUPPLY BEFORE RURAL WATER SUPPLY PROGRAMME

PURPOSE	SOURCE					
	COMMUNITY WELL	OWN WELL	POND	LAKE	RIVER	OTHERS
FOR COOKING	669	196	7	-	11	216
FOR WASHING CLOTHES	655	196	144	2	36	211
FOR ANIMALS	311	154	238	11	97	176

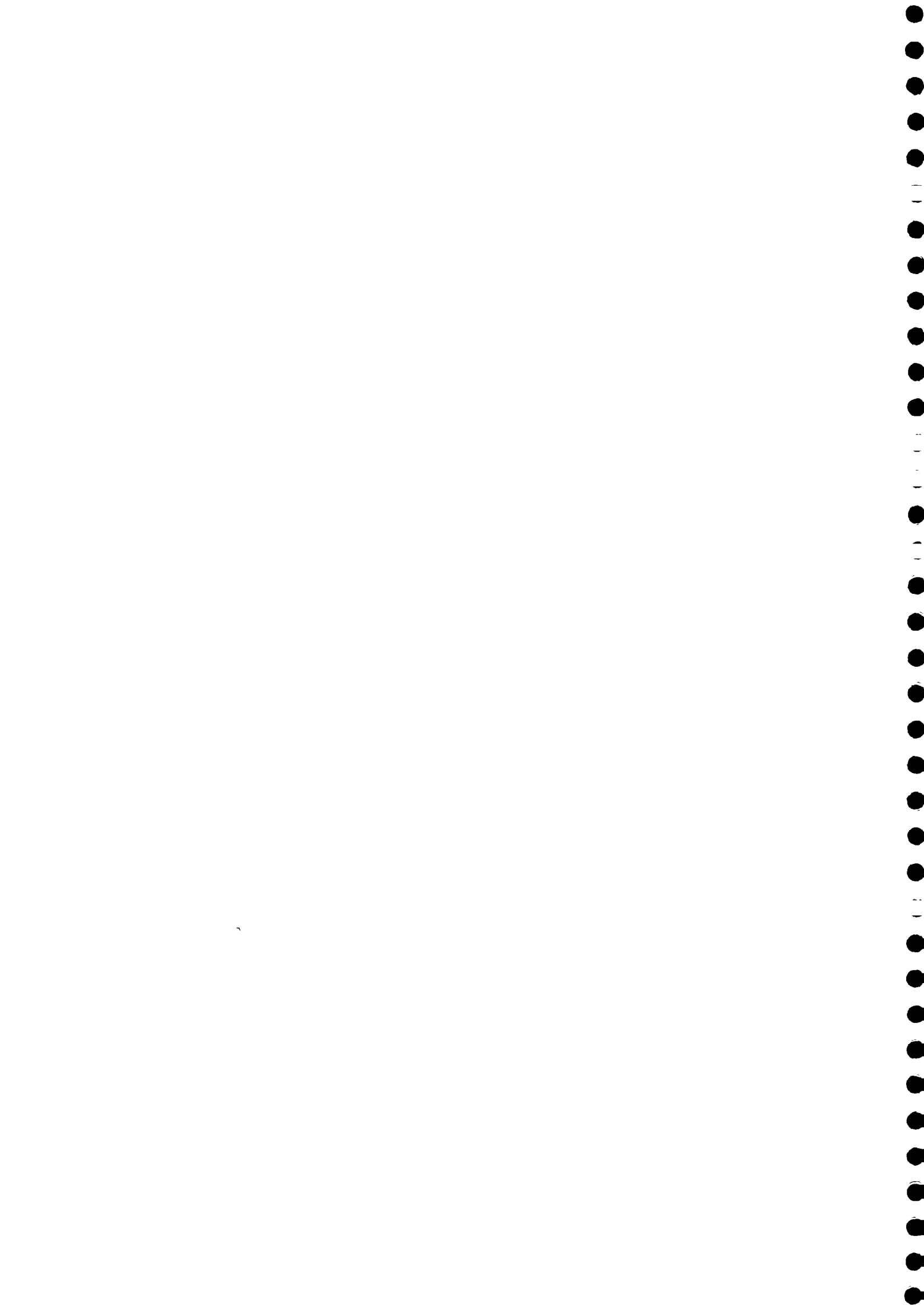
Fetching water for household purpose

Out of the total 1049 households surveyed, 0.95% households have reported that only female fetch water, 1.04% households have reported that only male fetch water & 97.99% households have reported that both male and female fetch water for household purpose. (Refer Table No. 3.8 also).

TABLE NO. 3.8

DISTRIBUTION OF PERSONS FETCHING WATER FOR HOUSEHOLD PURPOSE

	ONLY FEMALE	ONLY MALE	MALE & FEMALE
NO. OF HOUSEHOLDS	10	11	1028



Time taken and distance covered in fetching/collecting water

92.9% households have reported that they took 30 minutes to bring water, 4.67% households have reported that they take 31-45 minutes to bring water, 1.81% households have reported that they take 46-60 minutes of water and 0.57% households have reported that they take 61-90 minutes to bring water. (Refer Figure No. 3.4).

35.55 households have reported that they bring water from an average distance of 50 mts, 28.59% households have reported that they bring water from an average distance of 51-100 mts, 16.99% households have reported that they bring water from a distance of 101-200 mts, 13.06% households have reported that they bring water from an distance of 201-500 mts and 5.81% households have reported that they bring water from an distance of more than 500 mts. (Refer Table No. 3.9 & Figure No. 3.5 also).

TABLE NO. 3.9

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO DISTANCE COVERED AND TIME TAKEN TO BRING WATER

TIME IN MINUTES	DISTANCE IN METRES					
	UPTO 50	51-100	101-200	201-500	501-1000	>1000
UPTO 30	373	298	167	97	23	17
31-45	-	2	11	30	6	-
46-60	-	-	-	10	9	-
61-90	-	-	-	-	-	6

Problems in getting water before rural water supply programme

The surveyed households were asked about the main problems they faced in getting water before rural water supply programme 50.61% households have reported that sources of water used to get dried up at times, 38.66% households have reported that they used to get dirty / unhygeinic water, 30.02% households have reported that adequate quantity was not available, 24.3% households have reported that the water source was at a very long distance 3.05% households have reported that there was irregular supply/availability of water and 4.76% households have reported some other problems also (multiple responses reported). (Refer Table No. 3.10 & Figure No. 3.6 also).

Sources of water used to get dried up at times  
dirty / unhygeinic water  
adequate quantity was not available  
the water source was at a very long distance  
irregular supply/availability of water  
some other problems also

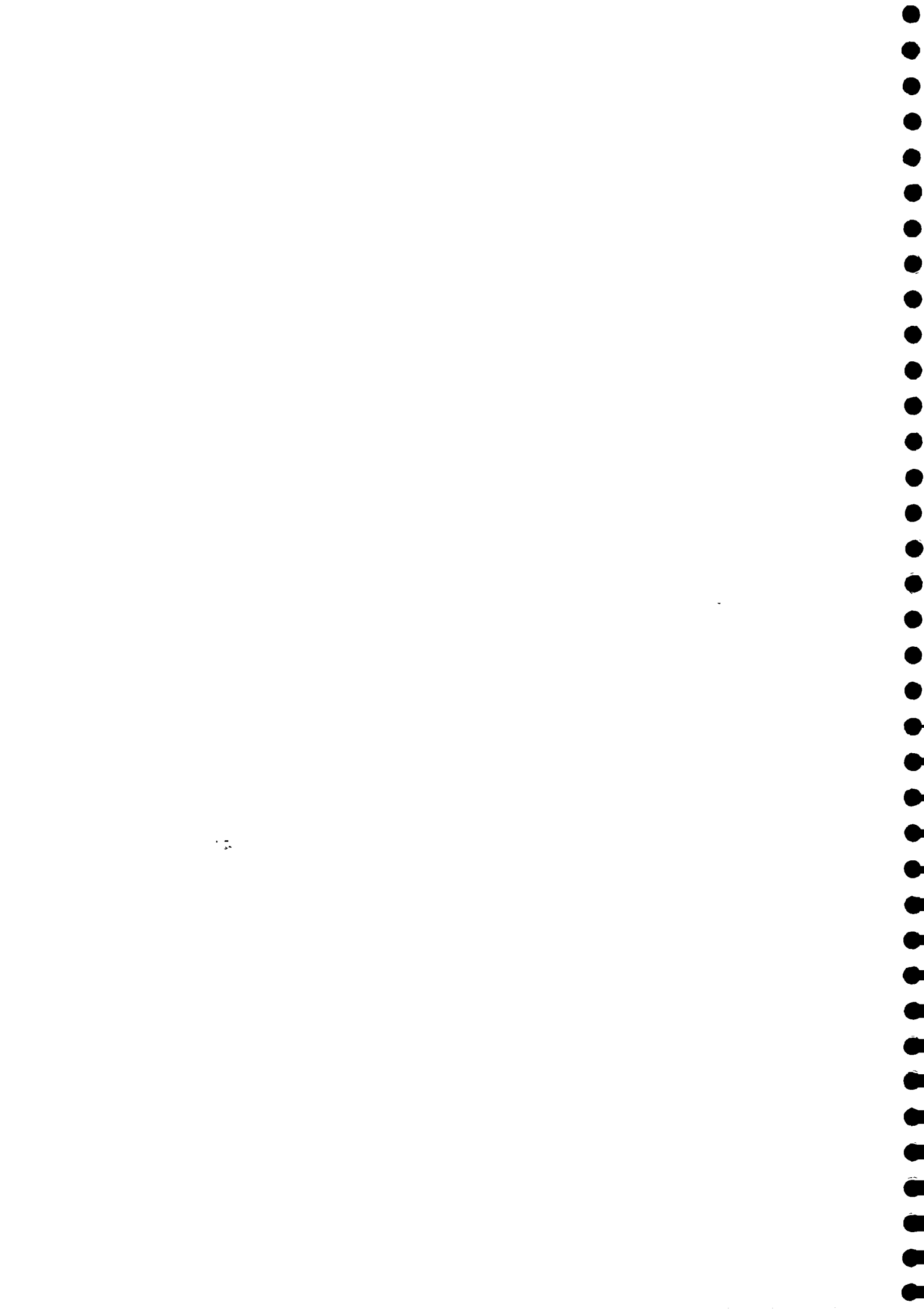


TABLE NO. 3.10

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO PROBLEMS IN GETTING WATER BEFORE RURAL WATER SUPPLY PROGRAMME

<u>PROBLEMS FACED FOR GETTING WATER BEFORE RURAL WATER SUPPLY PROGRAMME</u>	<u>NO. OF HOUSEHOLDS</u>
Sources of water used to get dried up at times	531
Water available was unhygeinic	405
Adequate quantity of water not available	315
Distance to the source of water was long	255
Irregular supply/availability	32
Rest	50

Current Water sources after rural water supply programme

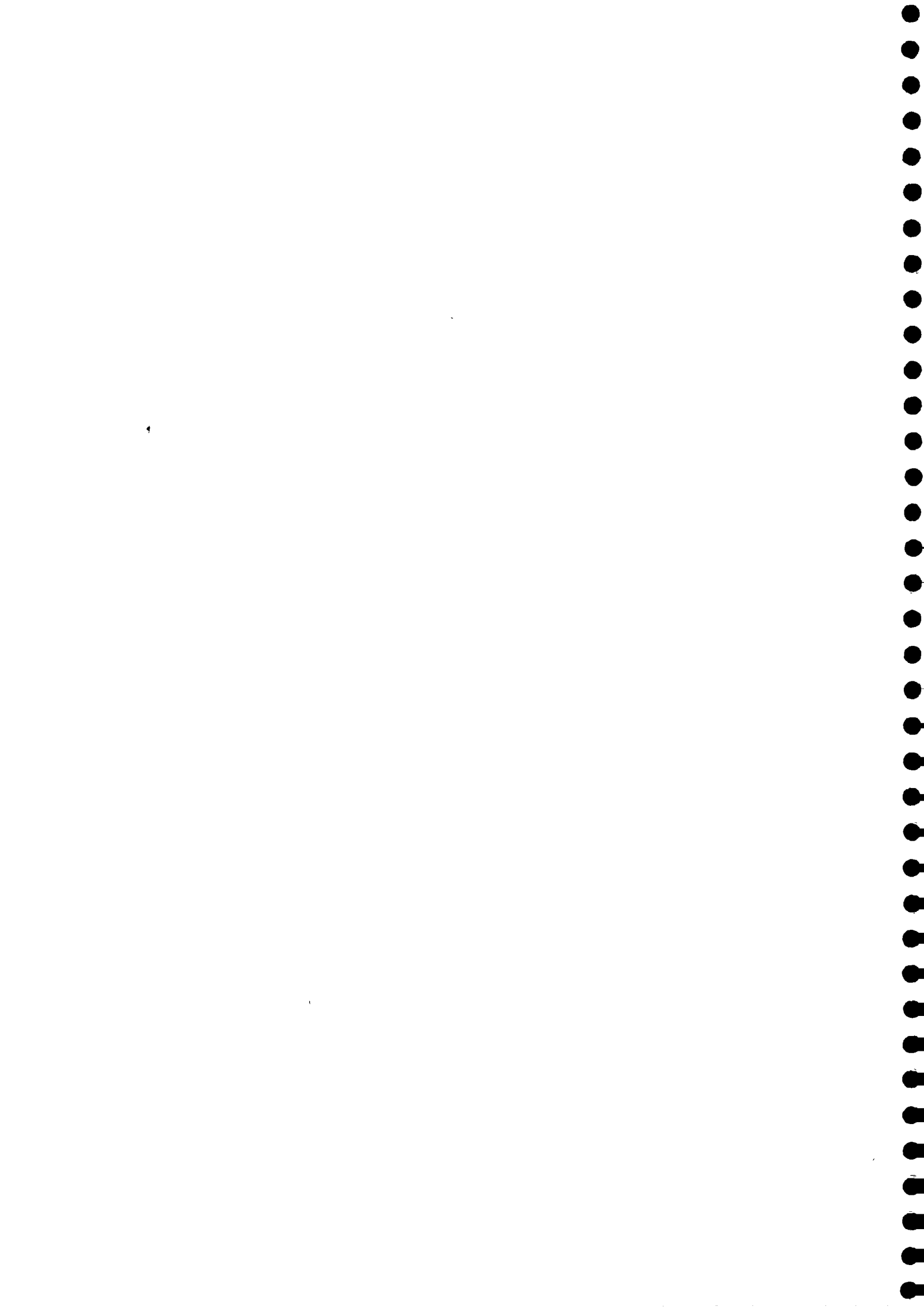
Out of the government water supply sources it is reported that 73.4% households use water from hand pumps. Out of the non-government water supply sources, it is reported that 35.93% households use water from community wells, 25.92% households use water from their own well, 2.95% households use water from ponds, 1.52% households use water from rivers and 24.4% households use water from other private sources like self pumps, etc.

*dk what water is used*

Distance of water source

19.63% households have reported that the hand pumps are at a distance of 0-50 mts, 31.64% households have reported that it is at a distance of 51-100 mts from their residence, 12.67% households have reported that it is at a distance of 101-150 mts, 6.95% households have reported that it is at a distance of 151-200 mts, 4.95% households have reported that it is at a distance of 201-500 mts & 0.57% households have reported that it is at a distance of 501-1000 mts.

4.76% households have reported that the community well is at a distance of 0-50 mts, 14.48% households have reported that it is at a distance of 51-100 mts from their residence, 11.43% households have reported that it is at a distance of 101-150 mts, 6.76% households have reported that it is at a distance of 151-200 mts, 4.48% households have reported that it is at a distance of 201-500 mts & 0.76% households have reported that it is at a distance of 501-1000 mts.





1.14% households have reported that the pond is at a distance of 51-100 mts, 1.81% households have reported that it is at a distance of 101-150 mts from their residence, 5.05% households have reported that it is at a distance of 151-200 mts, 7.24% households have reported that it is at a distance of 201-500 mts & 2.54% households have reported that it is at a distance of 501-1000 mts.

0.38% households have reported that the river is at a distance of 0-50 mts, 0.47% households have reported that it is at a distance of 51-100 mts from their residence, 0.47% households have reported that it is at a distance of 101-150 mts, 1.14% households have reported that it is at a distance of 151-200 mts, 1.62% households have reported that it is at a distance of 201-500 mts & 4.28% households have reported that it is at a distance of 501-1000 mts. (Refer Table No. 3.11 also).

**TABLE NO. 3.11**

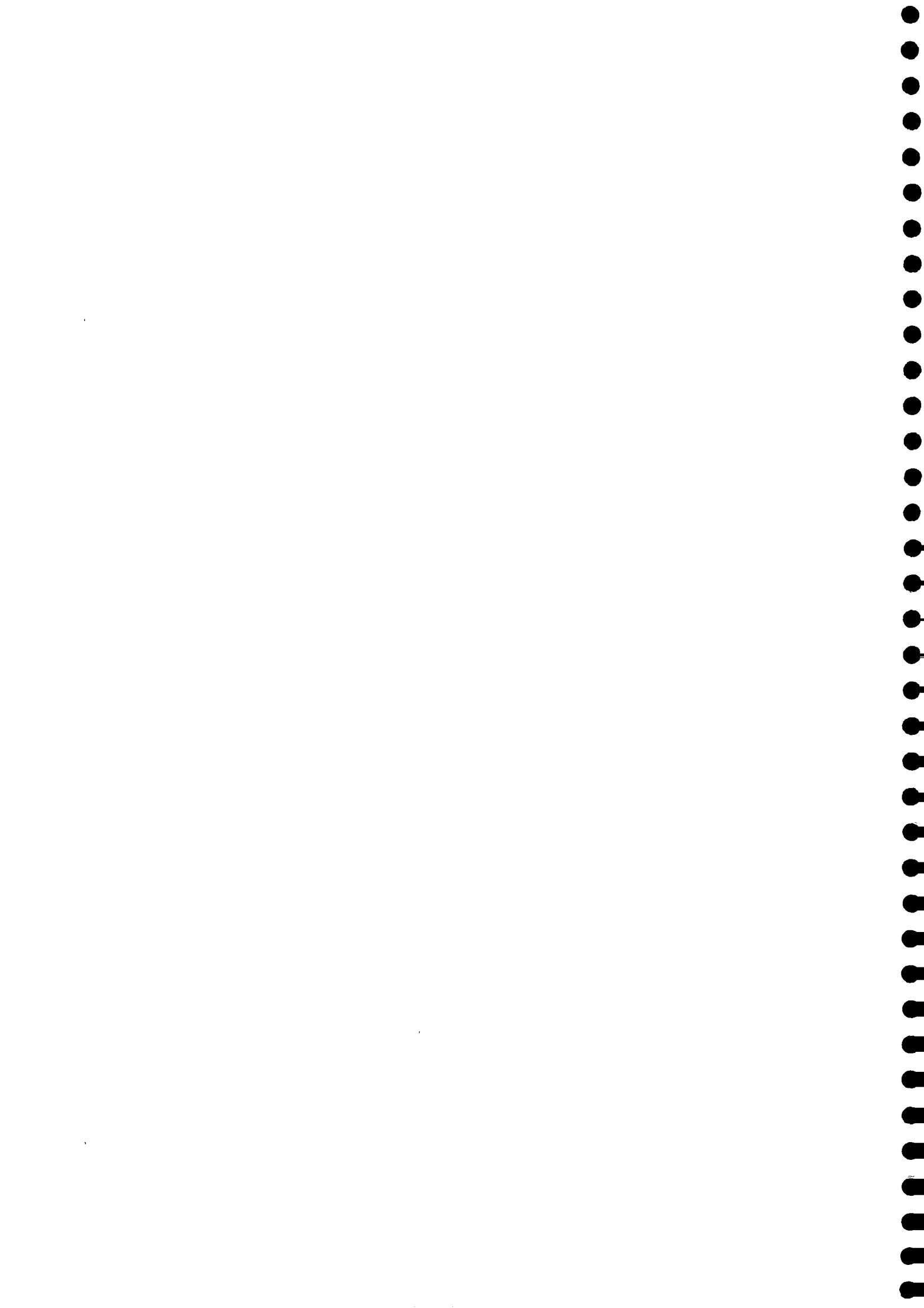
**DISTRIBUTION OF HOUSEHOLDS ACCORDING TO CURRENT SOURCE OF WATER SUPPLY AND QUALITY OF WATER**

SOURCE	QUALITY		DISTANCE IN METRES			
	DRINKABLE	NON-DRINKABLE	0-50	51-100	101-150	151-1000
Hand pump	770	66	206	332	133	73
Community well	377	143	50	152	120	71
Own well	272	137	83	99	50	26
Pond	31	174	-	12	19	53
River	16	54	4	5	5	12
Others	256	16	168	68	14	7

**Problem after rural water supply programme**

Though there are water sources like community well, self/own wells, pond and river, 6.29% households have reported that the water from the tube wells is not good for drinking, 13.63% households have reported that the water from the community wells is not good for drinking, 13.06% households have reported that the self / own wells are also not in good condition, 16.58% households have reported that water from the pond is not good for drinking and 5.14% households have reported that the river water is also not good for drinking.

Villagers were asked about the functional status of source of water supply. According to 60 81% households hand pumps are functioning properly, according to 12.1% households the hand



pumps are not functioning properly and according to 15.15% households the hand pumps are not at all functioning.

61.29% households have reported having some problems or the other even after the implementation of rural water supply programme while 38.7% have not reported any problems. Out of these 61.29% households who have reported problems, 60.8% households have reported that sources of water gets dried up at times, 39.5% households have reported that they were not getting adequate quantity of water, 36.85% have reported that the water sources is at a very long distance, 16.79% households have reported that they get dirty/unhygeinic water, 3.41% households have reported that people belonging all the community are not allowed to take water from the water source every time, 2.33% households have reported that there is irregular supply of water during day time, 0.7% households have reported that there is irregular supply of water daily. It is also reported that in some areas water contains iron. Villagers were unaware and expressed their inability to comment on other problems like fluorosis, arsenic content, brackishness, etc. (Refer Table No. 3.12 also).

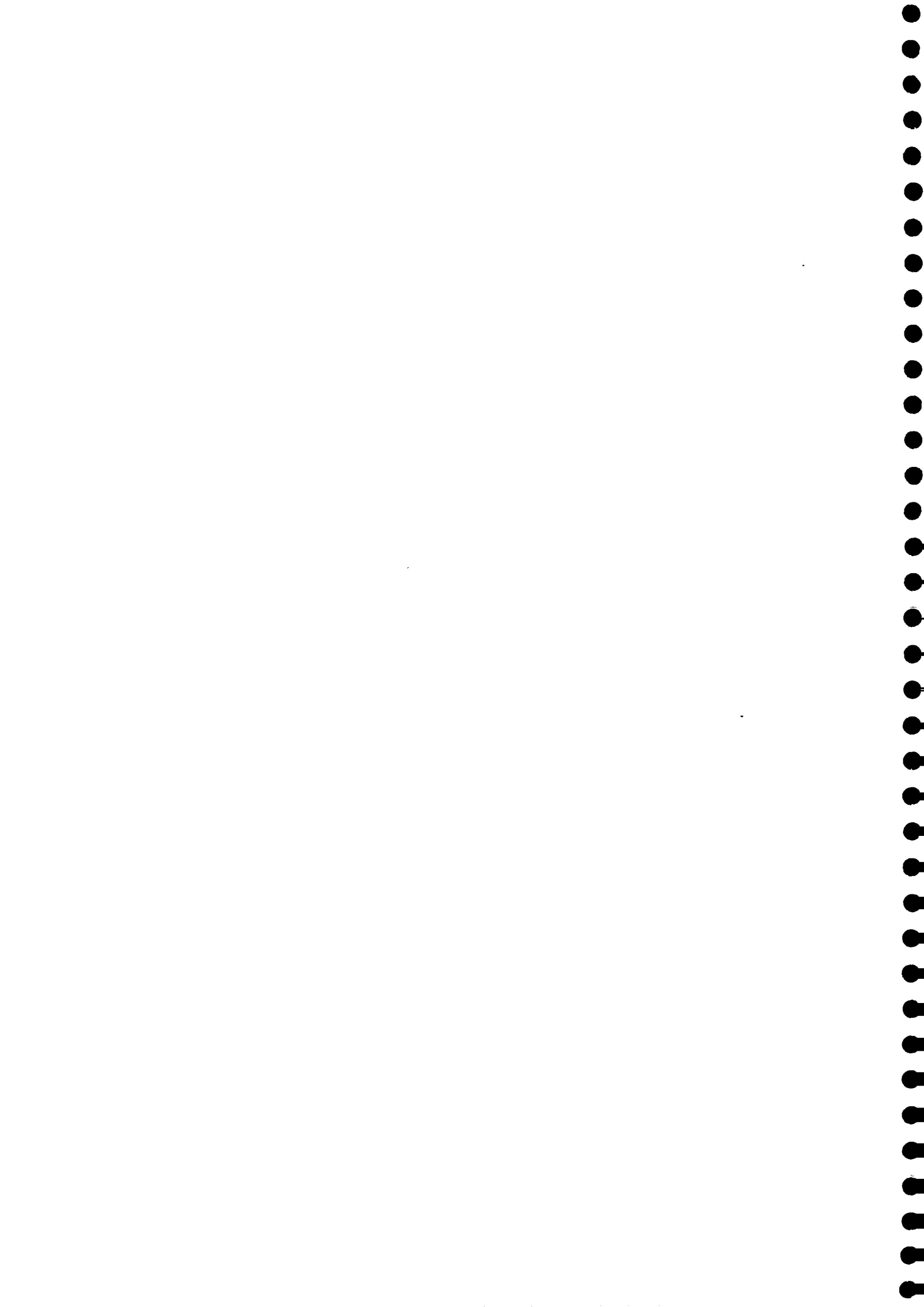
**TABLE NO. 3.12**

**DISTRIBUTION OF HOUSEHOLDS ACCORDING TO THE PROBLEMS REPORTED**

<u>PROBLEMS</u>	<u>NO. OF HOUSEHOLDS</u>
Sources of water used to get dried up at times	391
Adequate quantity of water not available	254
Distance of source of water was long	237
Hygienic water was available	108
All community people are not allow to take water from the water source everytime	22
Irregular supply during day	15
Irregular supply daily	5

**Duration of scarcity period of water supply after rural water supply programme**

Out of the total 1049 nos. households surveyed, 56.24% households have reported that there will be scarcity of water for 1-2 months, 16.77% households have reported that there will be scarcity of water for 3-4 months, 0.66% households have reported that there will be scarcity of water for 5-6 months, 1.14%



households have reported that there will be scarcity of water for 9-10 months and 0.76% households have reported that there will be scarcity of water 11-12 months. (Refer Table No. 3.13 also).

TABLE NO. 3.13

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO DETAILS  
OF WATER SOURCES AND PROBLEMS AFTER ARWSP

<u>PERIOD</u> <u>(IN MONTHS)</u>	<u>NO. OF HOUSEHOLDS</u>
1-2	590
3-4	176
5-6	7
9-10	12
11-12	8

Quantity of Water available during scarcity & non-scarcity period

**For cooking and drinking**

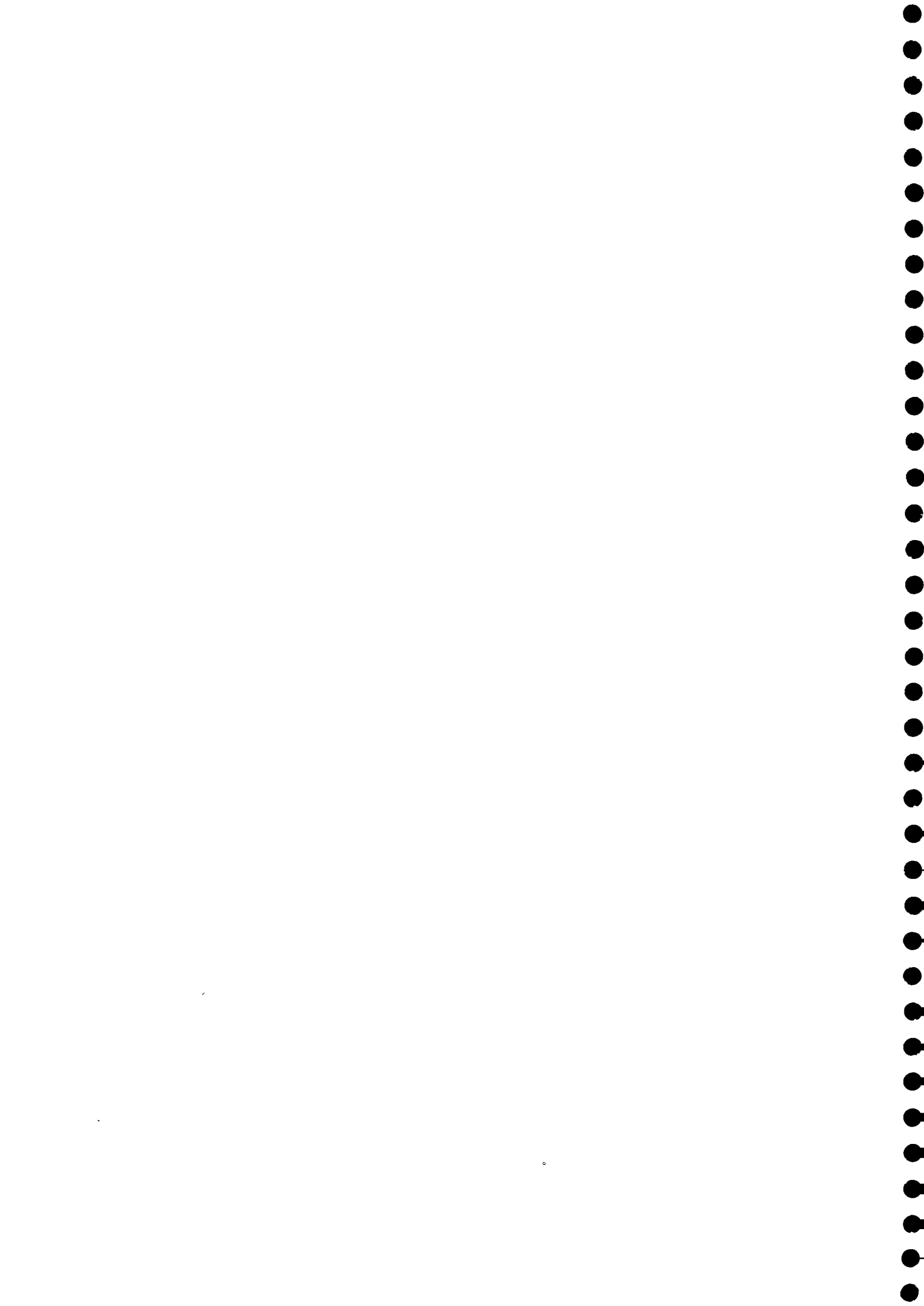
It is reported that the daily per capita availability of water for cooking and drinking during scarcity period of 26.78% households is upto 10 litres of water, of 32.31% households is 10-20 litres of water, of 22.78% households 20-30 litres of water, of 16.3% households is 30-50 litres of water and of 1.7% households is 50-90 litres of water.

It is reported that during non-scarcity period the daily per capita availability of water for cooking and drinking purpose of 21.54% households upto 10 litres of water, of 31.45% households is 10-20 litres of water, of 44.6% households is 20-40 litres of water and of 2.18% households is above 50 litres of water.

**For washing clothes**

It is reported that during scarcity period the daily per capita availability of water for washing purpose of 12.39% households upto 10 litres of water, of 25.73% households is 10-20 litres of water, of 46.32% households is 20-40 litres of water & of 15.34% households is above 40 litres of water.

It is reported that during non-scarcity period the daily per capita availability of water for washing purpose of 3.14% households upto 10 litres of water, of 22.3% households is 10-20 litres of water, of 33.84% households is 20-30 litres of water, of 32.12% households is 30-50 litres of water and of 8.48% households is 50-140 litres of water.



Availability of water for animals

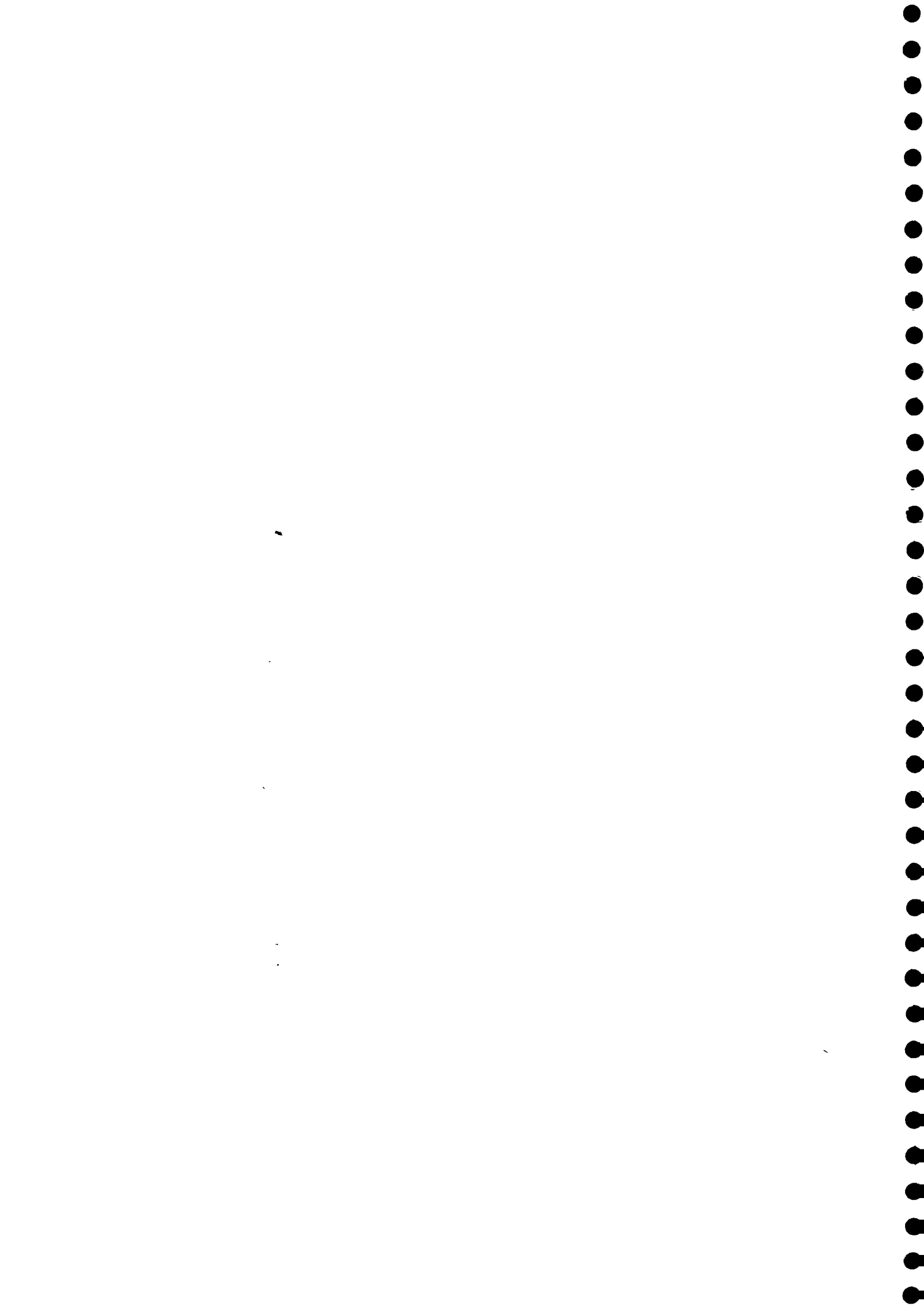
It is reported that the availability of water for animals during scarcity period of 24.78% households is 100 litres of water, of 14.68% households is 101-150 litres of water, of 10.96% households is 151-200 litres of water, of 5.52% households is 201-250 litres of water & of 9.22% households is 251-450 litres of water.

It is reported that the availability of water for animals during non-scarcity period of 1.23% households is 100 litres of water, of 4.09% households is 101-150 litres of water, of 5.62% households is 151-200 litres of water, of 8.67% households is 201-250 litres of water, of 8% households is 251-300 litres of water, of 9.43% households is 301-350 litres of water, of 8.38% households is 351-400 litres of water, of 6.95% households is 401-450 & of 39.94% households is 451-500 litres of water. (Refer Table No. 3.14 also).

TABLE NO. 3.14

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO CURRENT AVAILABILITY OF WATER SUPPLY DURING SCARCITY AND NON-SCARCITY PERIOD

PURPOSE	QUANTITY IN LITRES								
	>100	>100-150	>150-200	>200-350	>250-300	>300-350	>350-400	>400-450	>450-500
<u>During Scarcity</u>									
For Cooking	620	207	109	44	20	6	14	7	-
For Washing Clothes	349	237	154	121	78	34	30	21	6
For Animals	260	154	115	58	38	22	15	20	2
Total	25	79	91	111	146	77	86	76	27
<u>During Non-Scarcity</u>									
For Cooking	518	238	132	62	31	12	18	9	11
For Washing Clothes	145	277	234	143	86	42	52	31	17
For Animals	172	147	143	85	60	24	29	24	17
Total	13	43	59	91	84	99	88	71	43





Operation and Maintenance of Water Source

Persons responsible for the operation and maintenance

It is reported by 46.52% households that for the operation and maintenance of water source community is responsible, individuals are responsible according to 24.49% households, PHED is responsible according to 14.96% households, village panchayat is responsible according to 0.47% households, and 0.85% households have reported that some others are responsible for this while there was no response from others. (Refer Table No. 3.15 also)

TABLE NO. 3.15

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO  
THE PERSONS RESPONSIBLE FOR O & M

REASONS	NO. OF HOUSEHOLDS
Community	488
Individuals	257
PHED	157
Village Panchayat	5
Rest	9

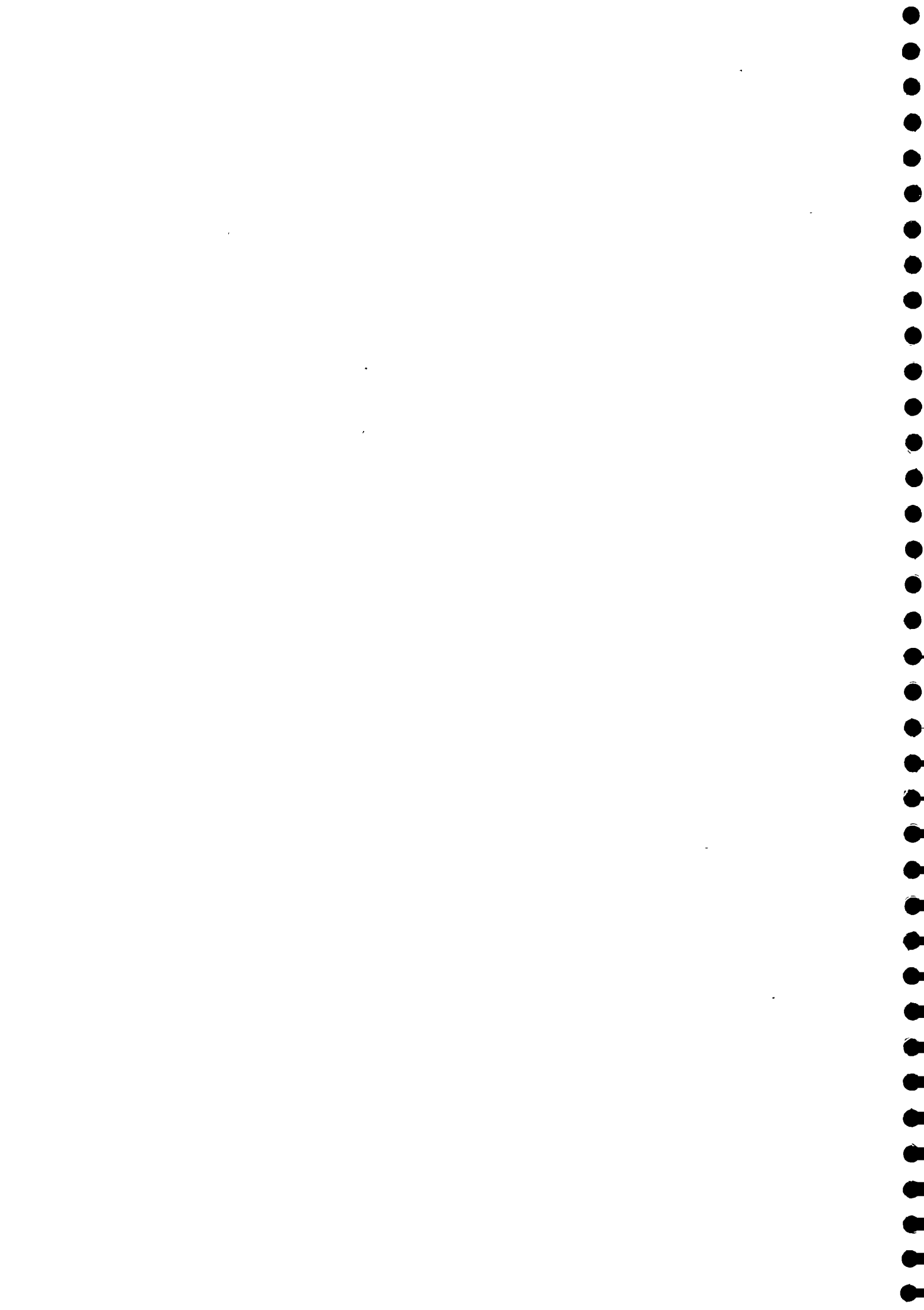
Cost of operation and maintenance of water source

The cost of operation and maintenance of water source is met by the community according to 42.7% households, individual persons according to 25.73% households, PHED according to 18.3% households, village panchayat according to 0.38% households while there was no response from others. (Refer Table No. 3.16 also).

TABLE NO. 3.16

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO THEIR OPINION  
ABOUT WHOM SHOULD MEET THE COST OF O & M

REASONS	NO. OF HOUSEHOLDS
Community	448
Individuals	270
PHED	192
Village Panchayat	4



Opinion about the present system of operation and maintenance of water source

60.34% households were satisfied with the present system of operation and maintenance while 39.65% households were not satisfied with the present water supply system. (Refer Figure No. 3.7).

Out of the 39.65% households who were not satisfied, 66.35% have reported that adequate funds were not available, 10.1% have reported that trained manpower is absent, 7.45% have reported that the responsibility for O & M is not fixed, 5.05% have reported that people did not pay their fixed share & 4.08% households have reported some other reasons also for their dissatisfaction. (Refer Table No. 3.17 & Figure No. 3.8 also).

TABLE NO. 3.17

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO THE REASONS GIVEN FOR THEIR DISSATISFACTION

<u>REASONS</u>	<u>NO. OF HOUSEHOLDS</u>
Adequate funds not available	276
Trained manpower was absent	42
Responsibility of O & M not fixed	31
Non-payment of their fixed share	21
Others	18

Frequent non-functioning of source of water

1.33% households have reported that the hand pumps stops functioning once in a week, 1.81% households have reported that the hand pumps stops functioning once in a fortnight, 5.91% households have reported that it stops functioning once in a month. 8.1% households have reported that it stops functioning once in 2 months, 22.49% households have reported that it stops functioning once in 3 months, 25.26% households have reported that it stops functioning once in a year & 4.76% households have reported that it stops functioning once in 2 years. (Refer Table No. 3.18 & Figure No. 3.9 also).

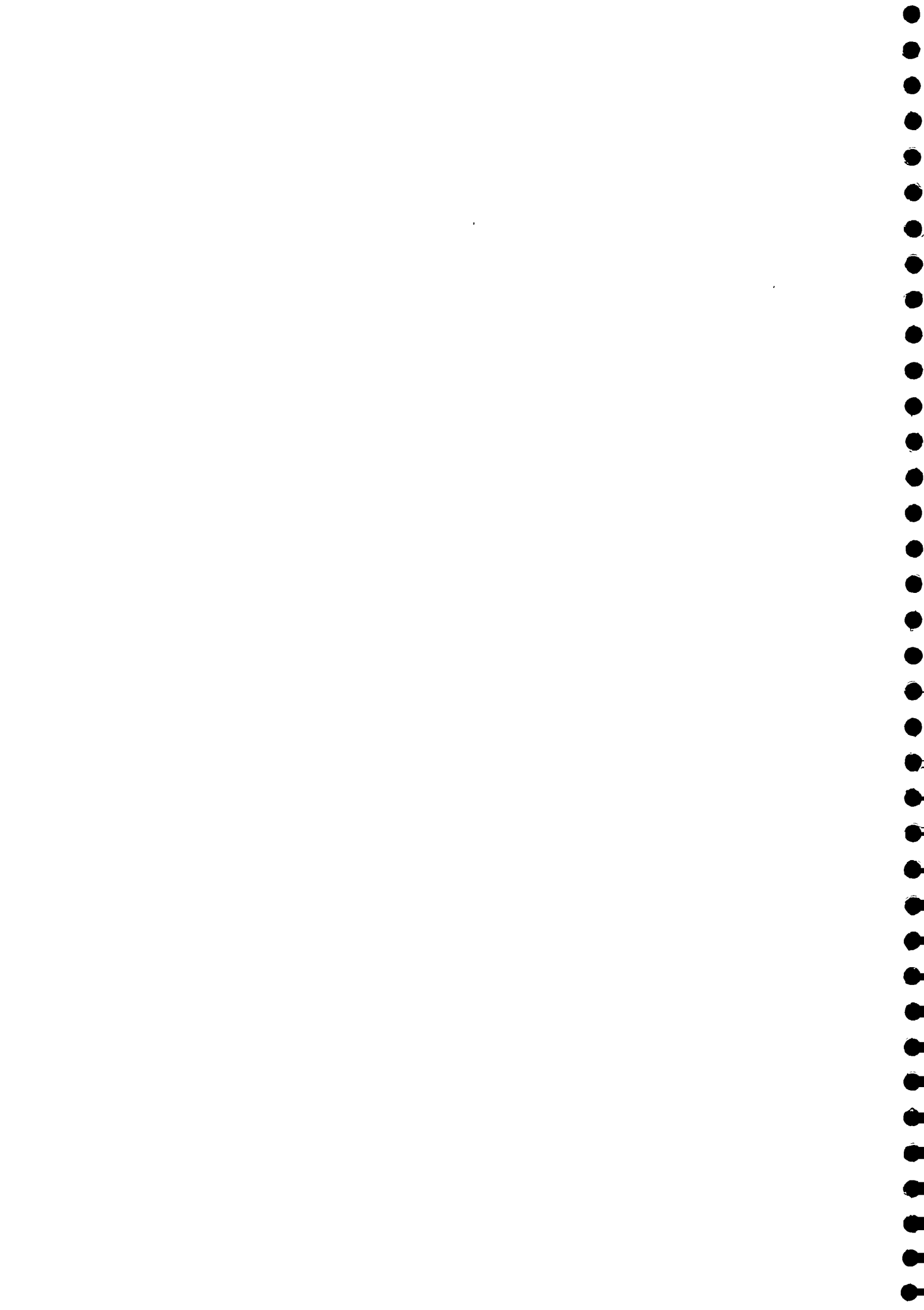


TABLE NO. 3.18

FREQUENCY OF THE SOURCE GOING OUT OF ORDER

<u>FREQUENCY</u>	<u>NO. OF HOUSEHOLDS</u>
Once in a week	14
Once in a fortnight	19
Once in a month	62
Once in 2 months	85
Once in a quarter	236
Once in a year	265
Once in 2 year	50
Others	32

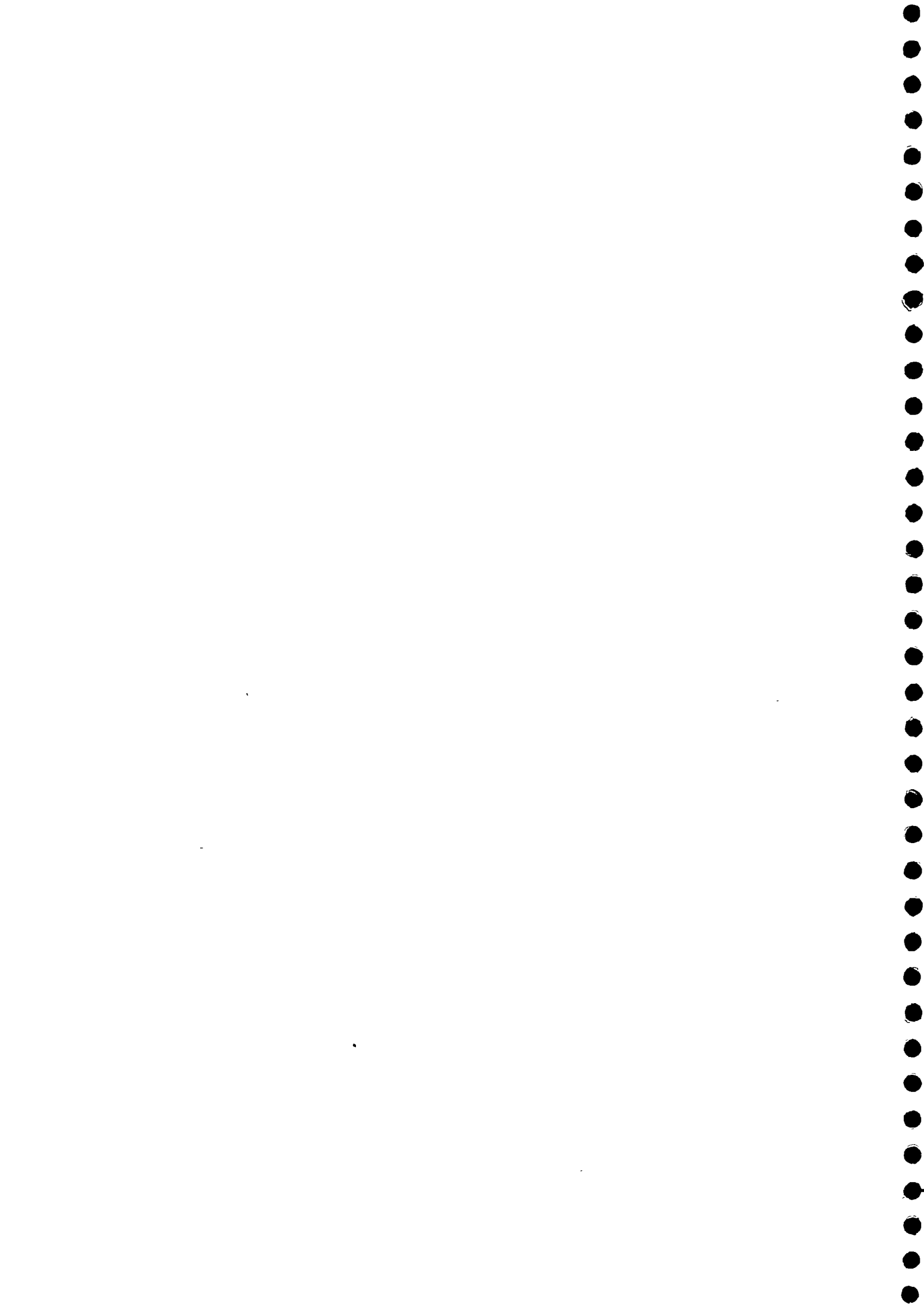
Reasons for non-functioning of the source of water

According to 21.35% households the non-functioning of the source of water is because of improper use, according to 18.68% households it is because of the installation of substandard equipments, according to 9.05% households it is because of faulty installation, according to 7.81% households it is because of natural calamities, according 1.9% households it is because of theft of parts according to 0.85% households it is because of damage by miscreants & 26.69% households have reported some other reasons also. (Refer Table No. 3.19 also).

TABLE NO. 3.19

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO REASONS REPORTED FOR THE WATER SOURCE GOING OUT OF ORDER

<u>REASONS</u>	<u>NO. OF HOUSEHOLDS</u>
Improper use	224
Substandard equipment	196
Faulty installation	95
Damage due to natural calamities	82
Theft of parts	20
Damage by miscreants	9
Rest	280



Cost for proper and regular water supply

Views of the villagers were elicited about whom should meet the cost for proper and regular water supply. According to 96.09% households government should meet the cost, according to 1.04% households panchayat should meet the cost, according to 0.09% households NGO should meet the cost or panchayat and government jointly should meet it, according to 0.66% households self/community should meet the cost and according to 0.57% PHED should meet the cost for proper and regular water supply. (Refer Table No. 3.20 also).

TABLE NO. 3.20

OPINION ABOUT THE PERSON WHOM SHOULD MEET THE COST OF WATER SUPPLY

	INSTALLATION	MAINTENANCE
Government	1008	560
Panchayat	11	9
Self/Community	7	275
PHED	6	42
NGO	1	11
Government & Panchayat	1	120

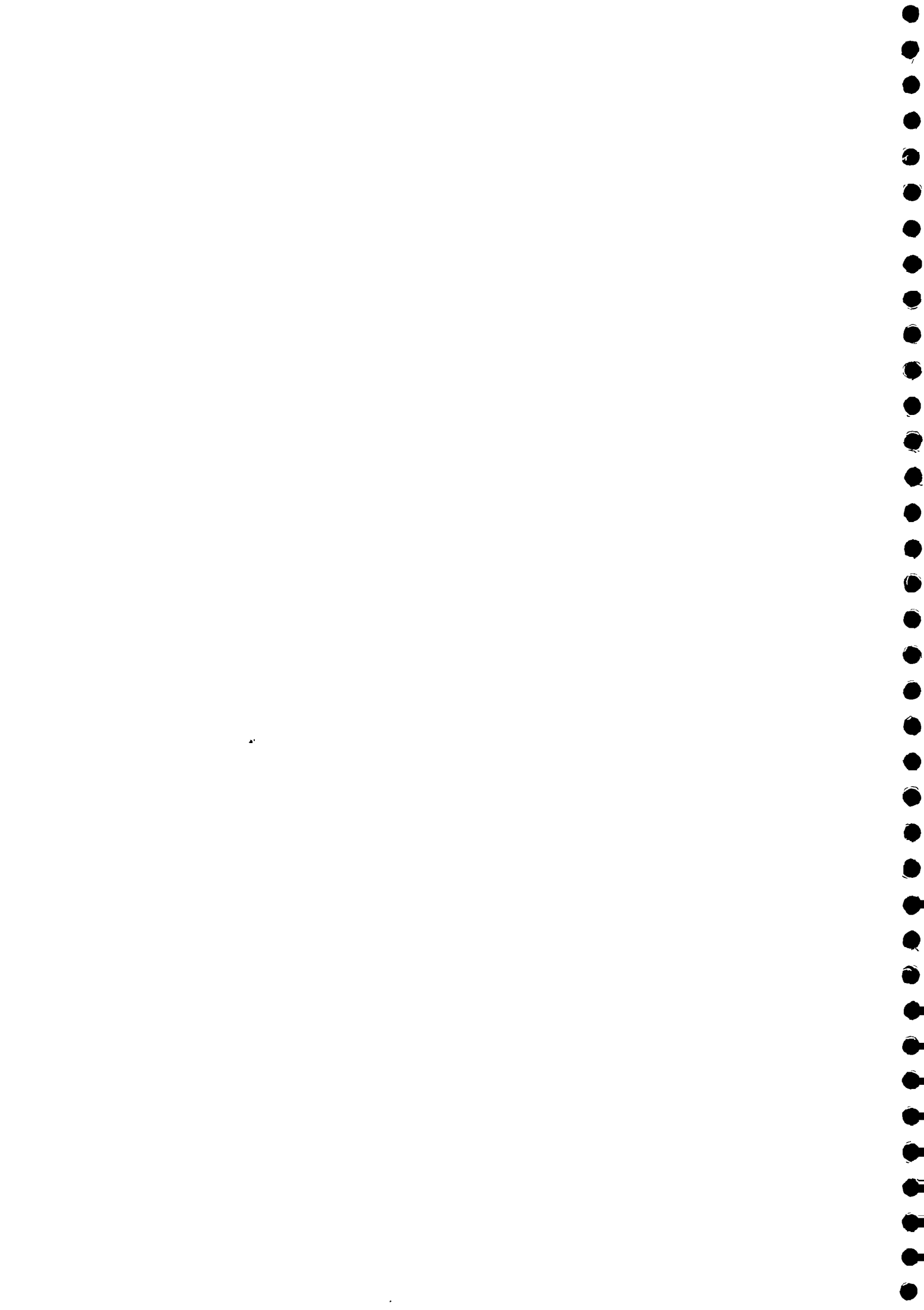
Extent and sharing pattern of the cost of installation / O & M

Villager's opinion were collected about the extent and sharing pattern of the cost of installation. According to 58.91% households there should be equal share per household, according to 25.07% households it should be proportionate to the number of family members and according to 2% households it should be proportionate to actual water consumption.

79.88% households were of the opinion that the amount should be less than Rs. 20/-, 3.81% were of the opinion that it should be in between Rs. 21- Rs.40/-, 0.85% were of the opinion that it should be in between Rs. 41- Rs.60/-, 0.66% were of the opinion that it should be in between Rs. 81- Rs 100/- and according to 0.47% households it should be less than Rs. 100/-. (Refer Figure No.3.10).

Contribution for the implementation of water source

It is reported that 16.11% households have contributed some amount and 83.88% households have made no financial contribution for the implementation of water source.





**SANTEK CONSULTANTS PVT LTD.**

**NEW DELHI** the 16.11% households who have contributed some amount, it is reported that 5.32% households have contributed an amount below Rs. 100/-, 5.32% households have contributed Rs.101-300, 0.57% households have reported that they contributed Rs. 301-500, 7.81% households have reported that they contributed Rs. 501-1000/- & 6% households have reported that they contributed more than Rs. 1000/-

**Quality of the water supply**

Villagers were asked about the quality of water available for cooking and drinking. But they were unable to express whether they are getting hygienic or unhygienic water. Because of the lack of awareness they were unable to differentiate the quality of water. They use all types of water for cooking and drinking without checking its quality. Thus 94.28% households were of the opinion that the water supplied is fit for drinking while 5.71% households were of the opinion that it is not fit for drinking.

**Testing drinking water or pollution check**

Around 98.66% households have reported that there is no regular checking of drinking water.

Out of this 20.67% households felt that it is because checking is not done in time, 79.03% households felt that there is no facility for checking/testing drinking water, 3.18% felt that no one ensures whether clean water is coming through water sources or not, 0.09% households felt that there is leakage in pipe lines and 0.28% households felt that cleanliness is not maintained around the water source.

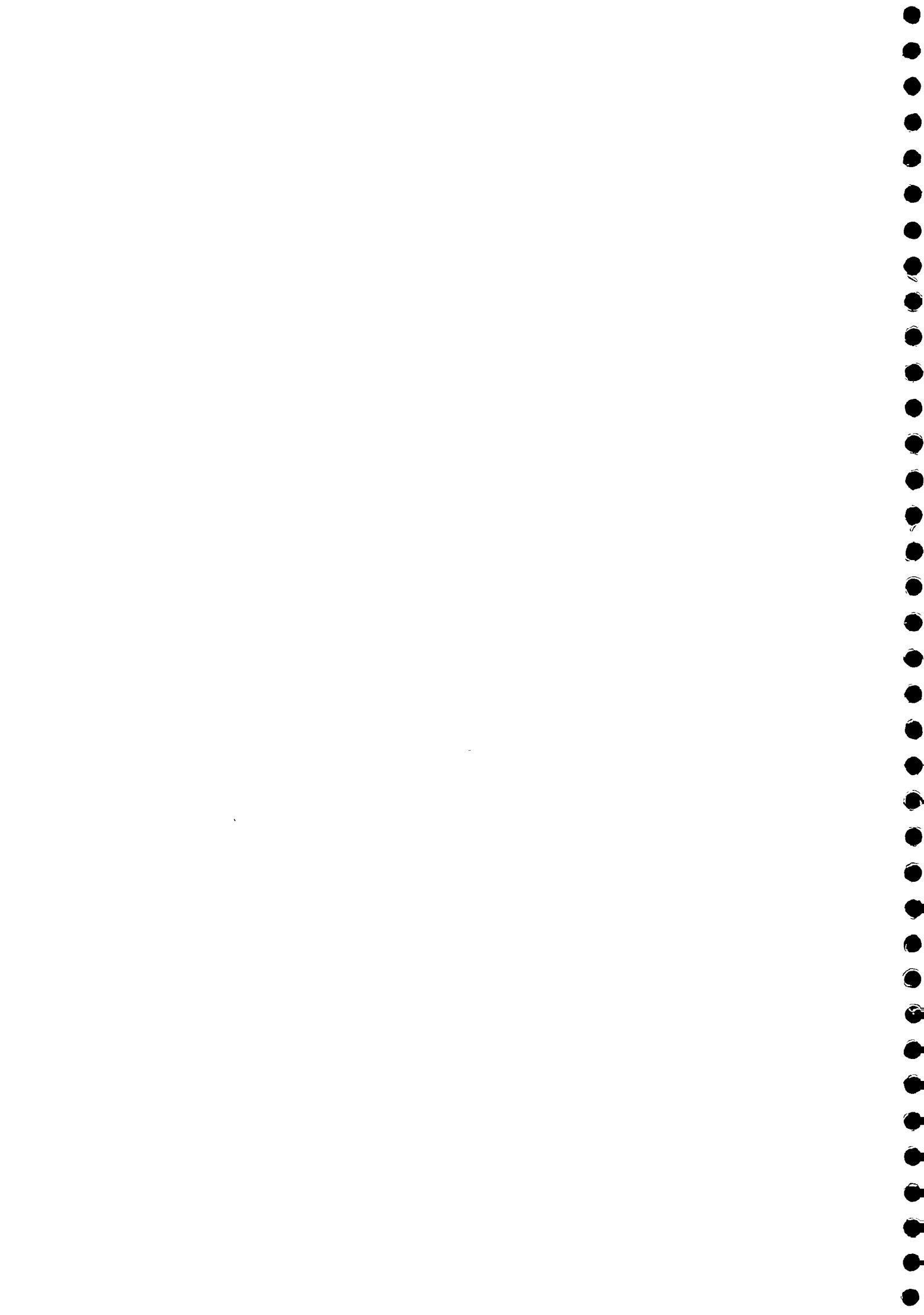
**Water borne diseases after rural water supply programme**

The occurrence of water borne diseases like diarrhoea decreased according to 32.12% households and not changed according to 14.87% households. The occurrence of cholera decreased according to 44.51% households and not changed according to 2.09% households. The occurrence of typhoid decreased according to 25.73% households and not changed according to 2.47% households. The occurrence of malaria decreased according to 28.02% households, increased according to 6% households and not changed according to 18.39% households, skin diseases decreased according to 2.19% households and other diseases decreased according to 6.29% households. (Refer Table No. 3.21 also).

**TABLE NO. 3.21**

**DISTRIBUTION OF HOUSEHOLDS ACCORDING TO OCCURRENCE OF WATER BORNE DISEASES**

DISEASES	DECREASED	NO CHANGE	INCREASED
Diarrhoea	337	156	9
Cholera	467	22	5
Typhoid	270	26	9
Malaria	294	193	63
Skin infection	23	3	5
Others	66	13	22



# PER CAPITA REQUIREMENT OF WATER FOR DRINKING & COOKING

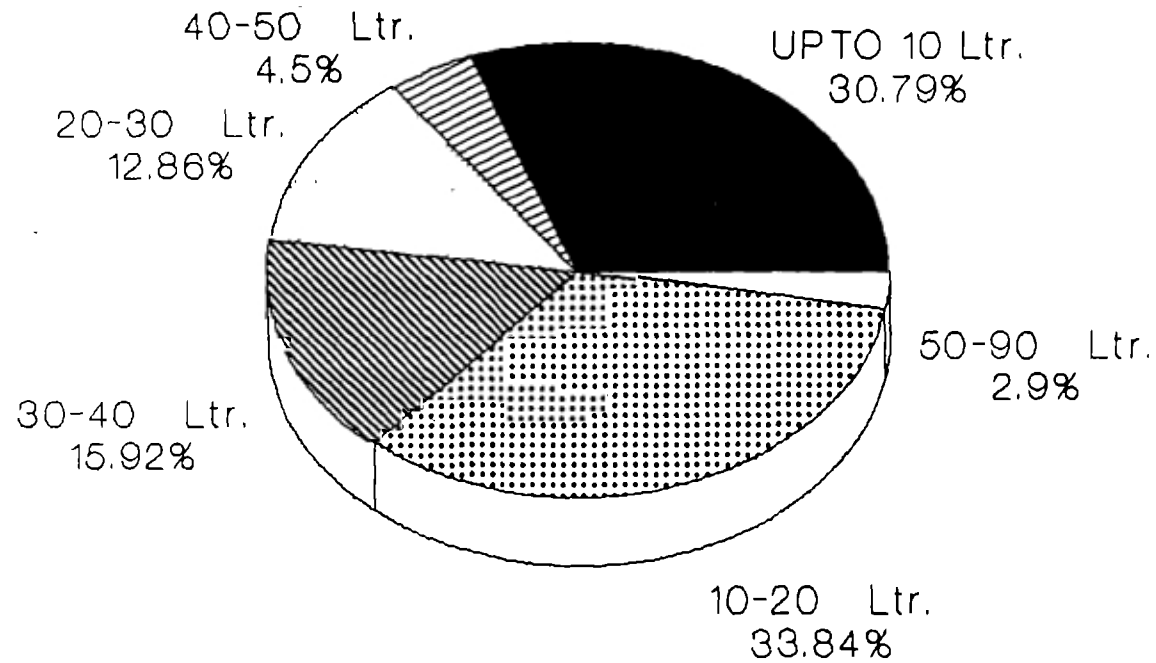
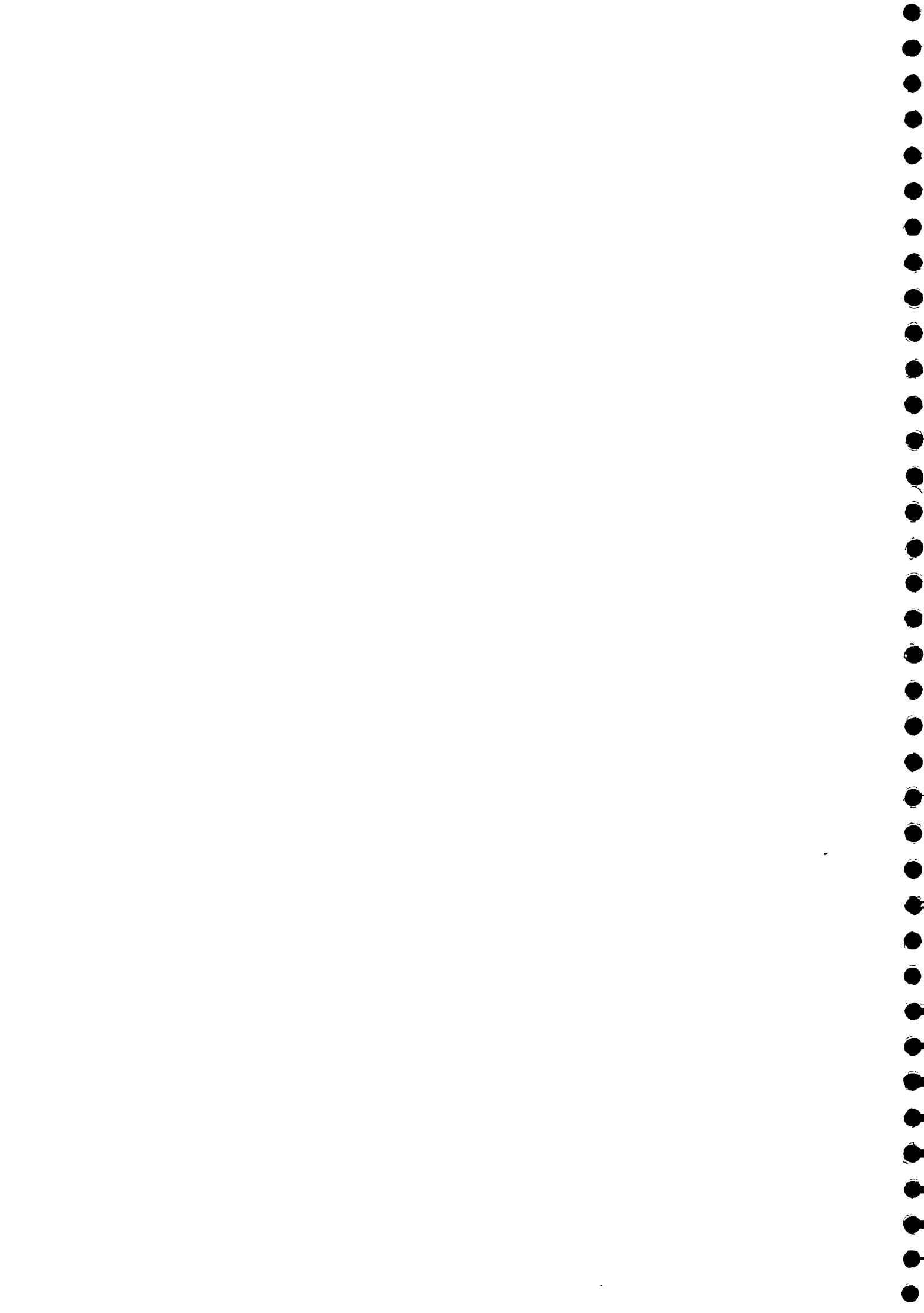


Figure No. 3.1



# PER CAPITA REQUIREMENT OF WATER FOR WASHING PURPOSE.

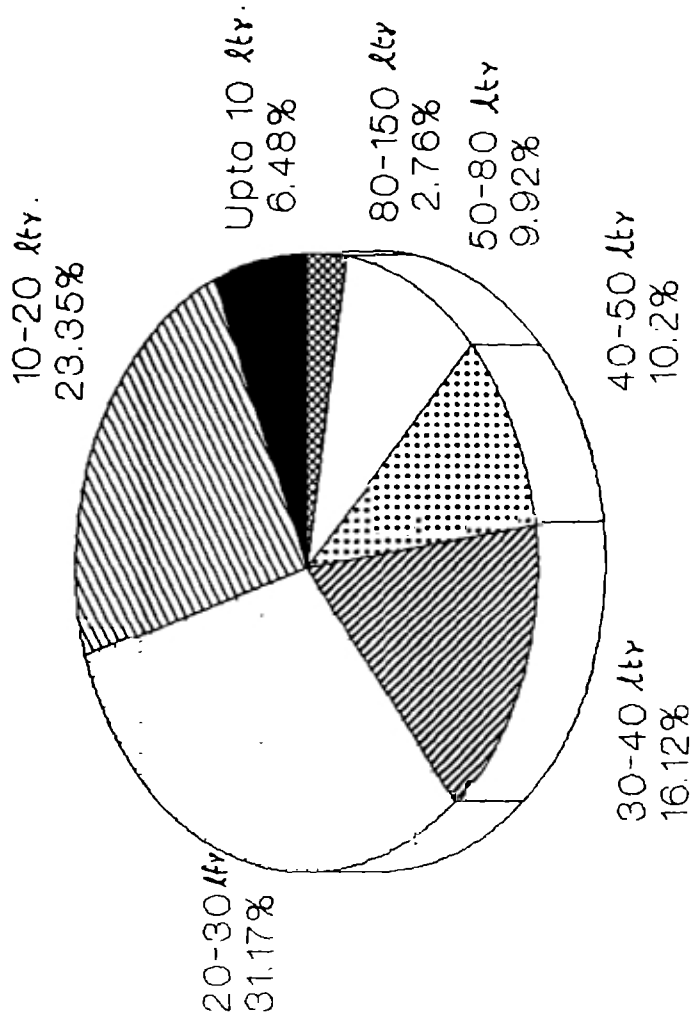
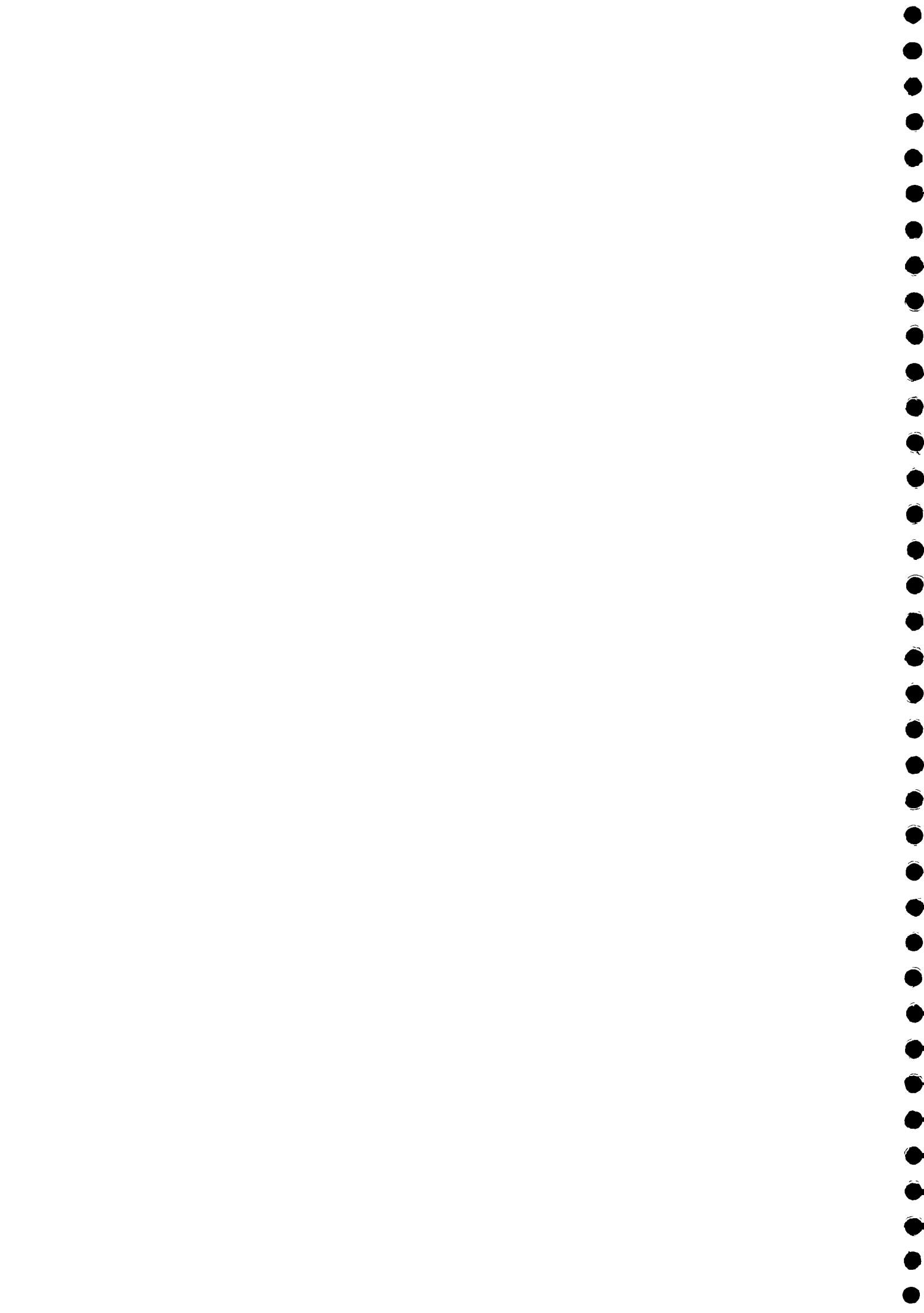
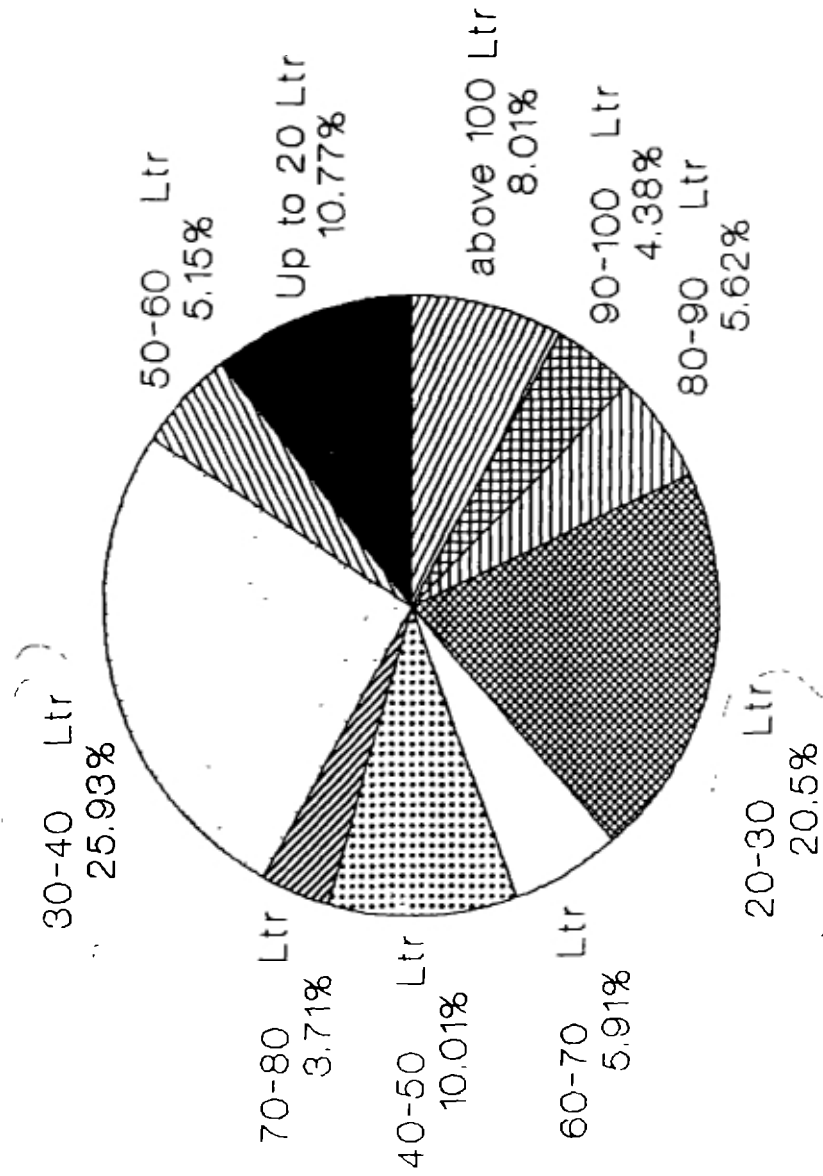


Figure No. 3.2

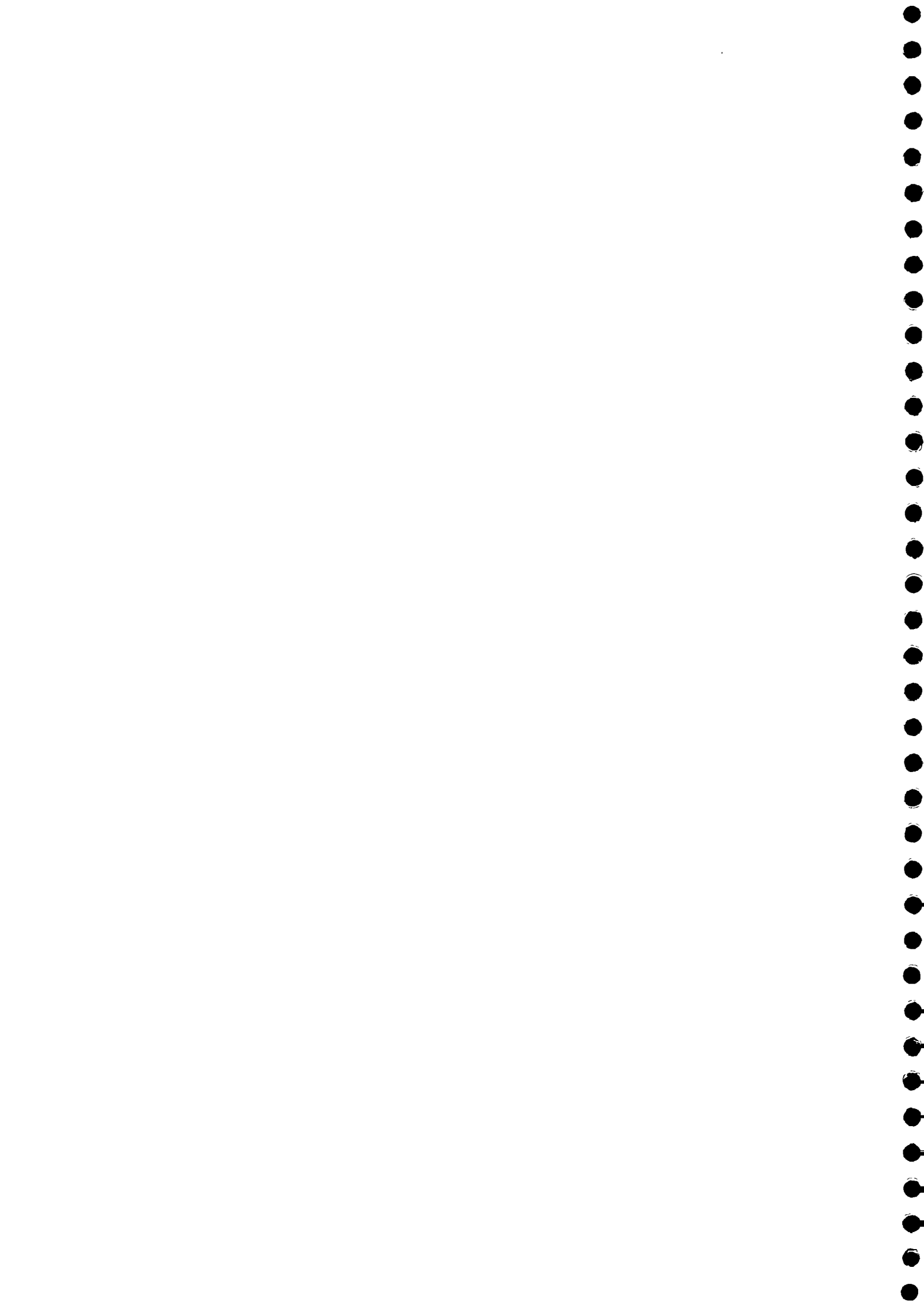


# DISTRIBUTION OF HOUSEHOLDS ACCORDING TO TOTAL PER CAPITA REQUIREMENT OF WATER.



संकेत संख्या : 57/2/6

Figure No. 3.3





DISTRIBUTION OF HOUSEHOLDS ACCORDING  
TO THE TIME TAKEN IN BRINGING WATER.

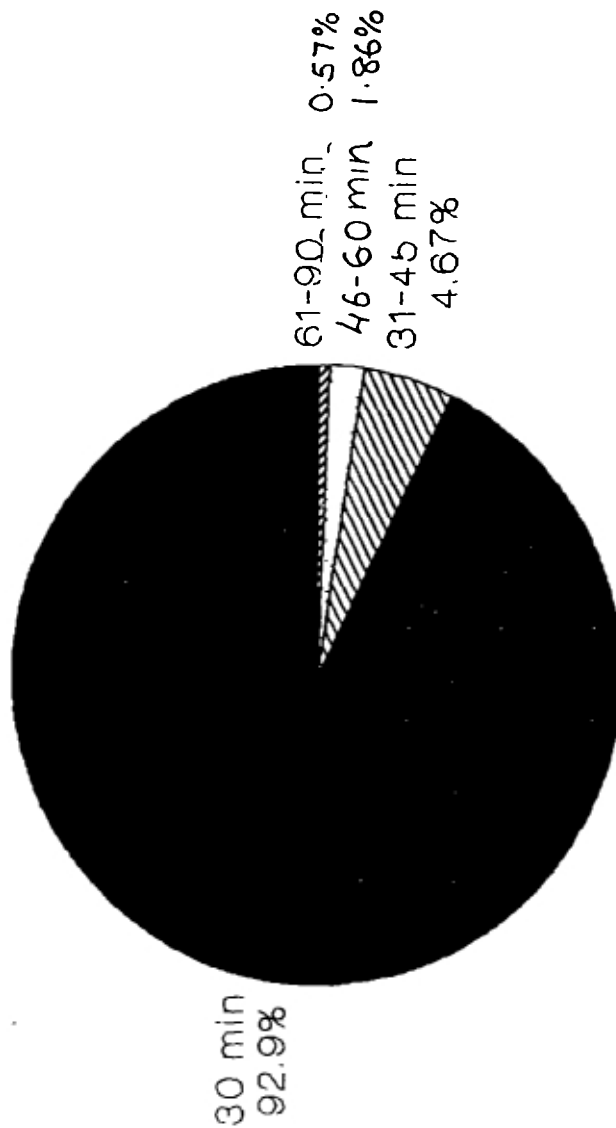
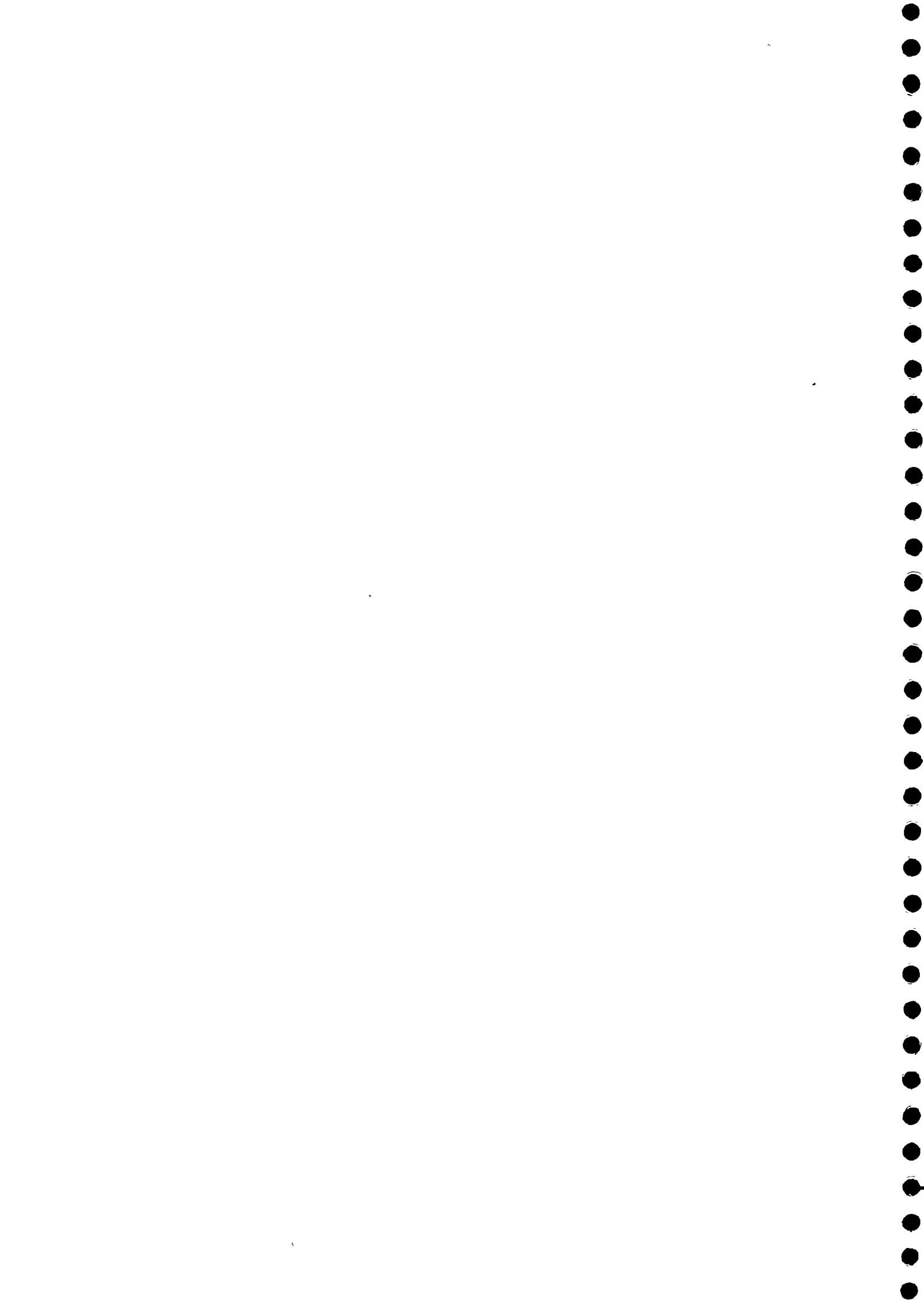


Figure No. 3.4



# DISTRIBUTION OF HOUSEHOLDS ACCORDING TO THE DISTANCE COVERED IN BRINGING WATER.

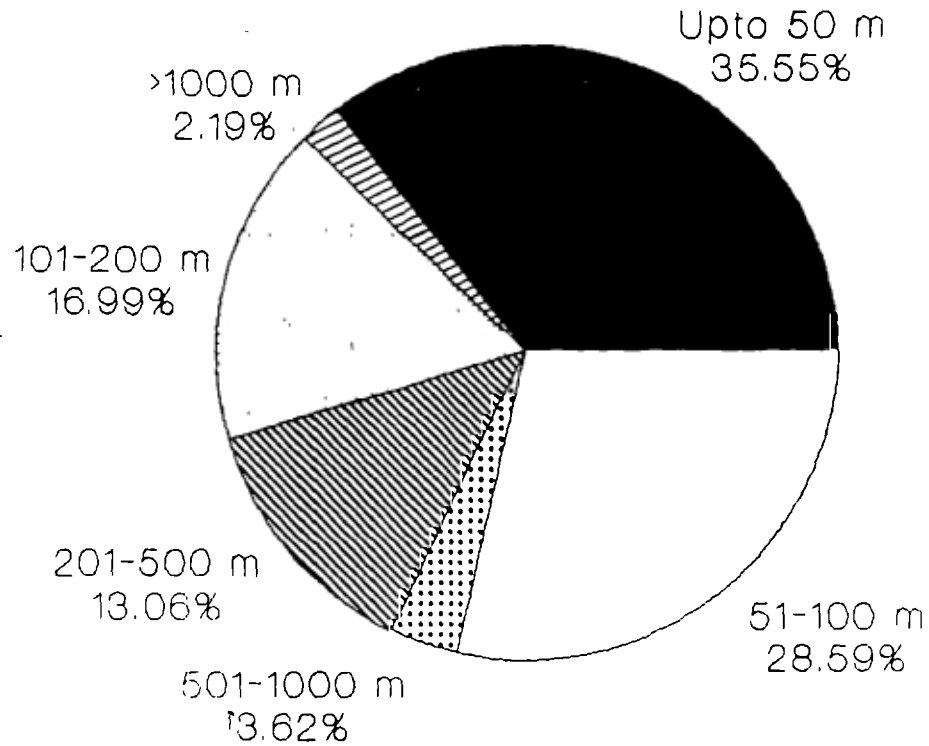
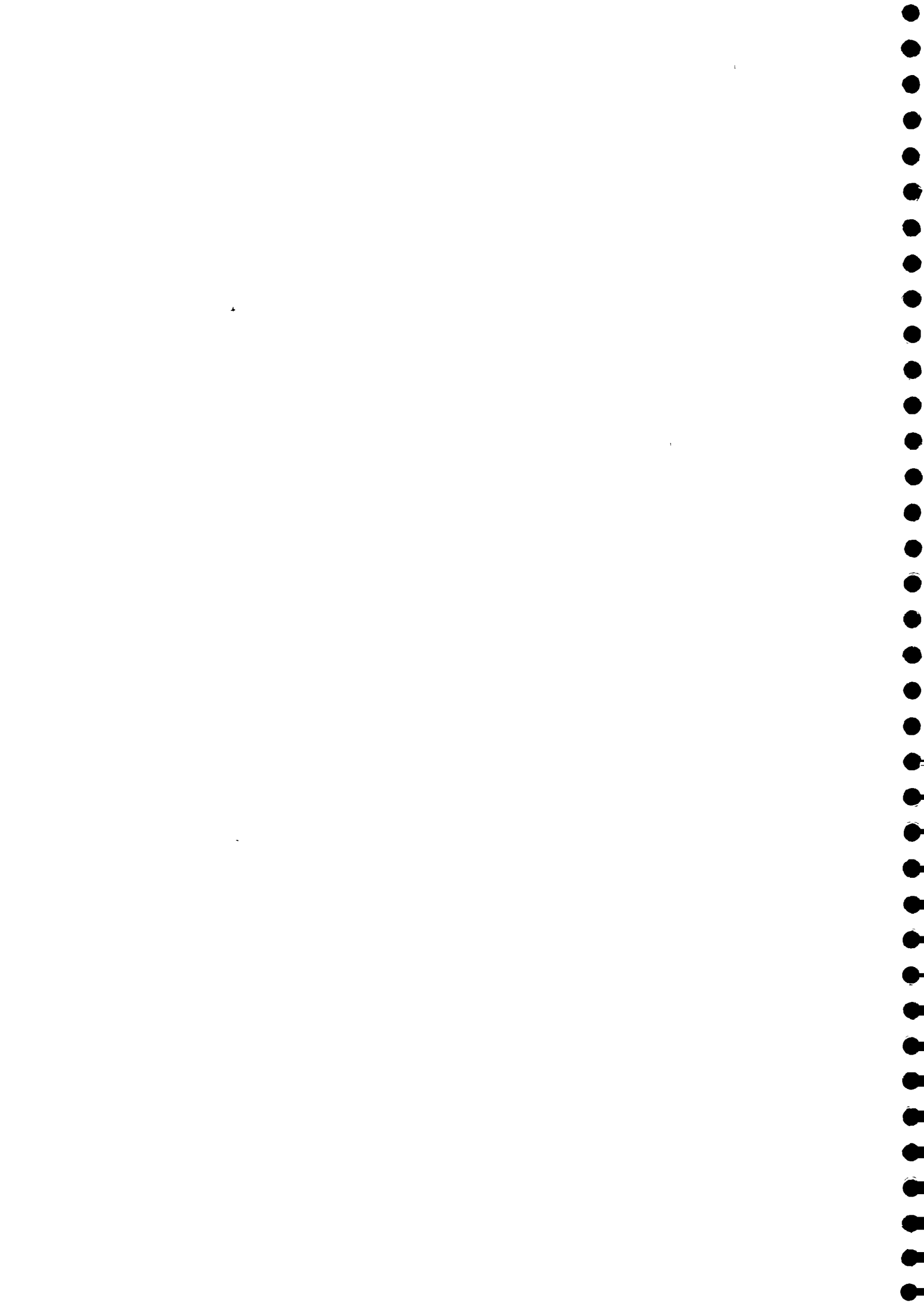
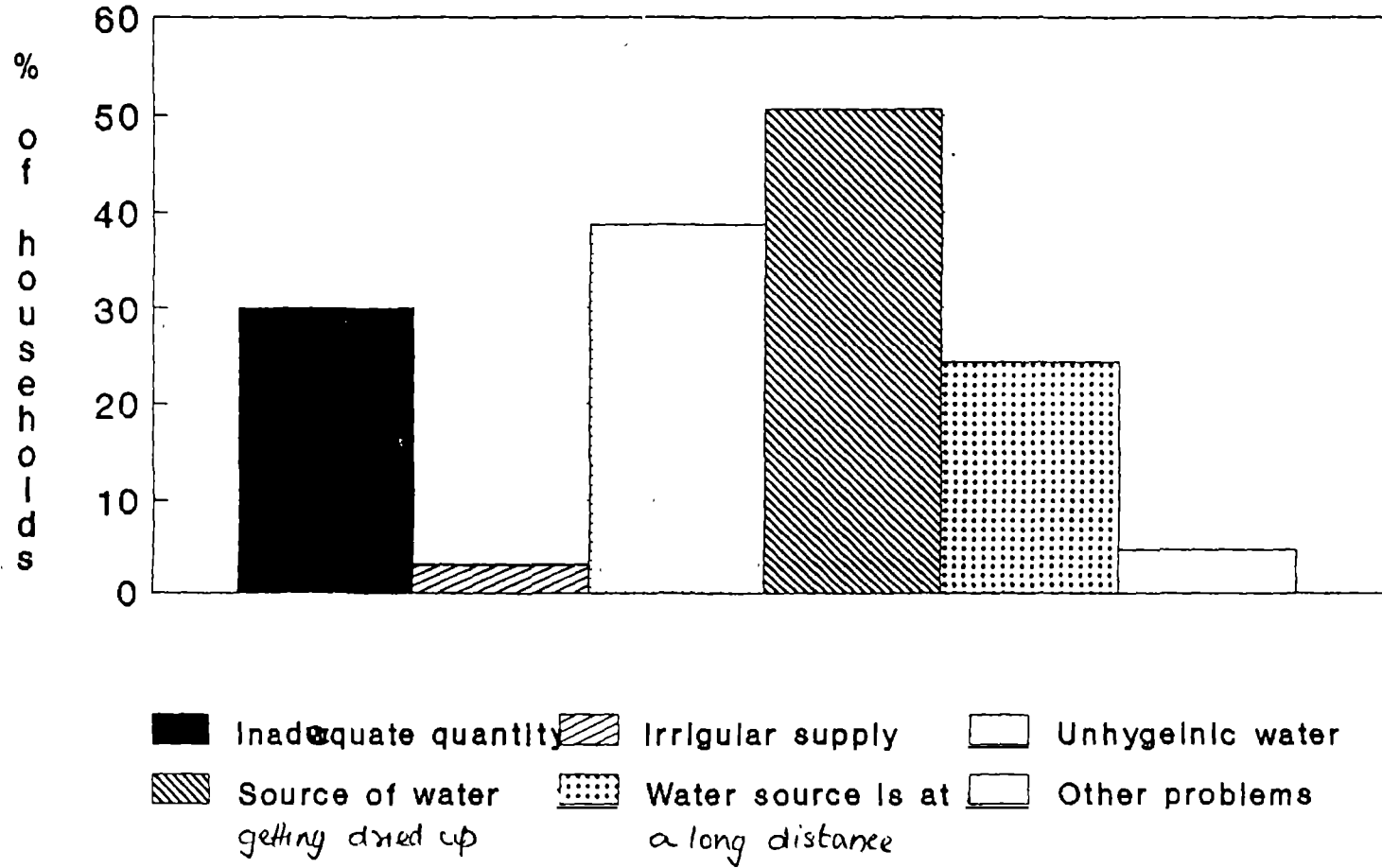


Figure No. 3.5

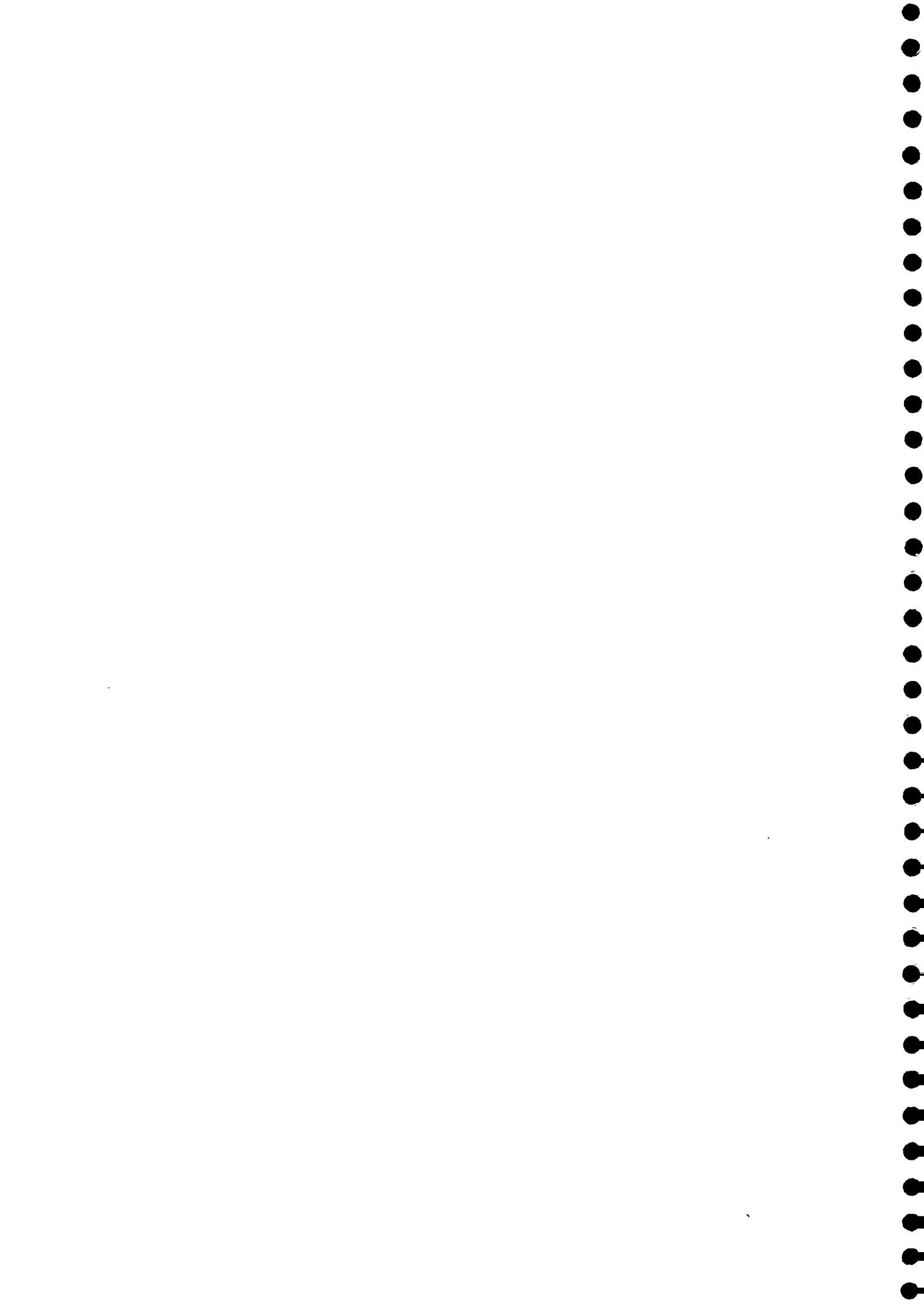


# DISTRIBUTION OF HOUSEHOLDS ACCORDING TO PROBLEMS REPORTED IN GETTING WATER.



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Figure No. 3.6



DISTRIBUTION OF HOUSEHOLDS ACCORDING TO  
THEIR VIEW ABOUT O&M OF WATER SOURCE.

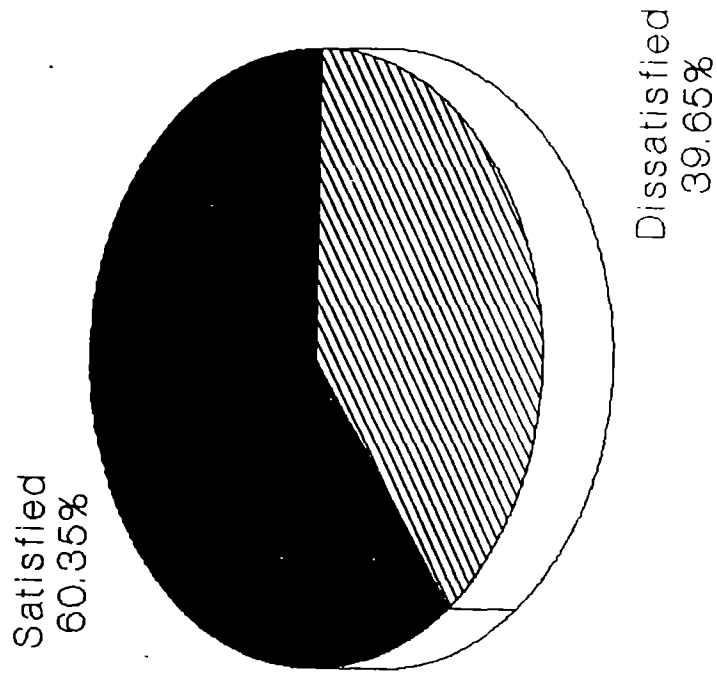
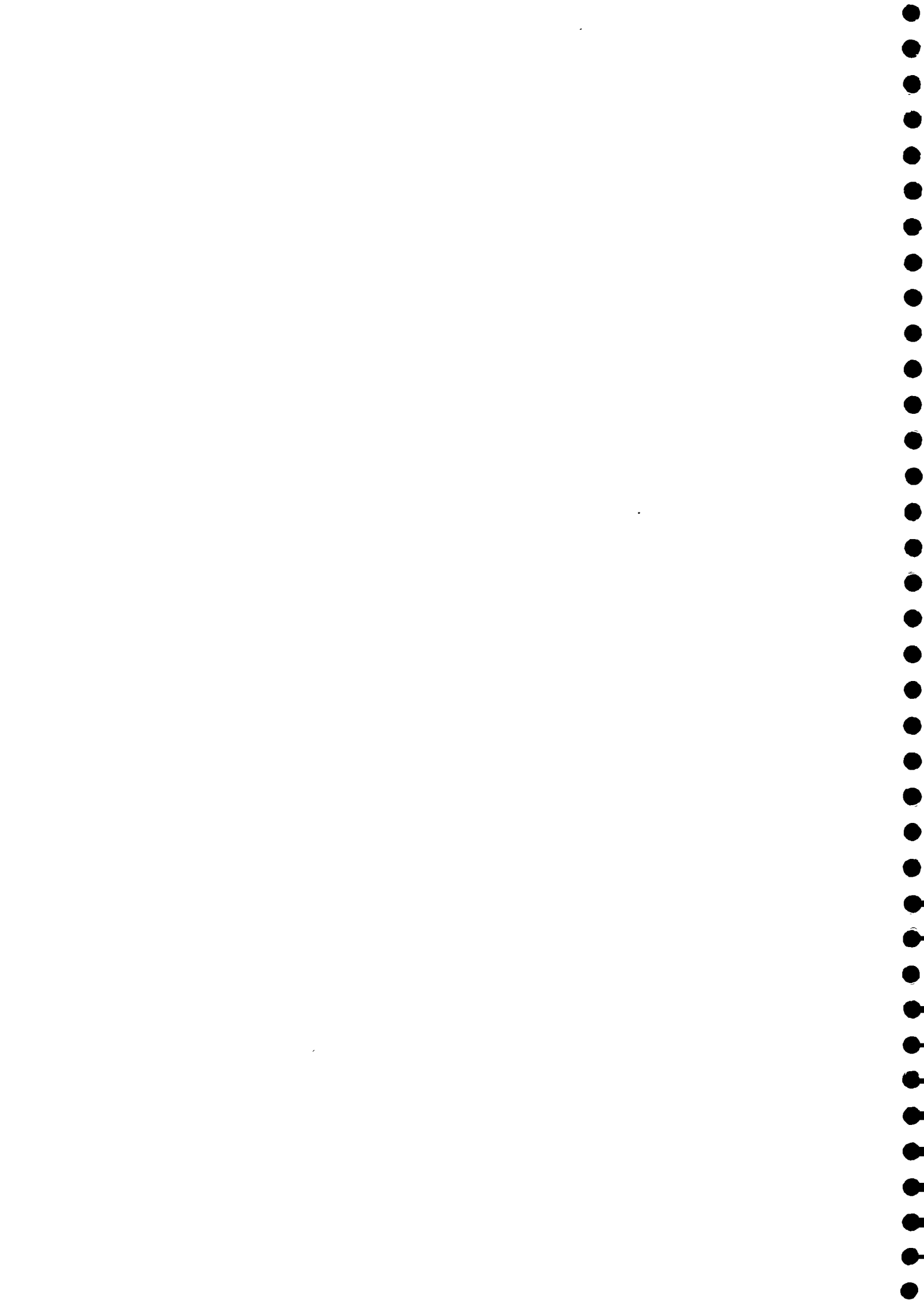


Figure No. 3.7





# REASONS FOR DISSATISFACTION WITH O&M OF WATER SOURCE.

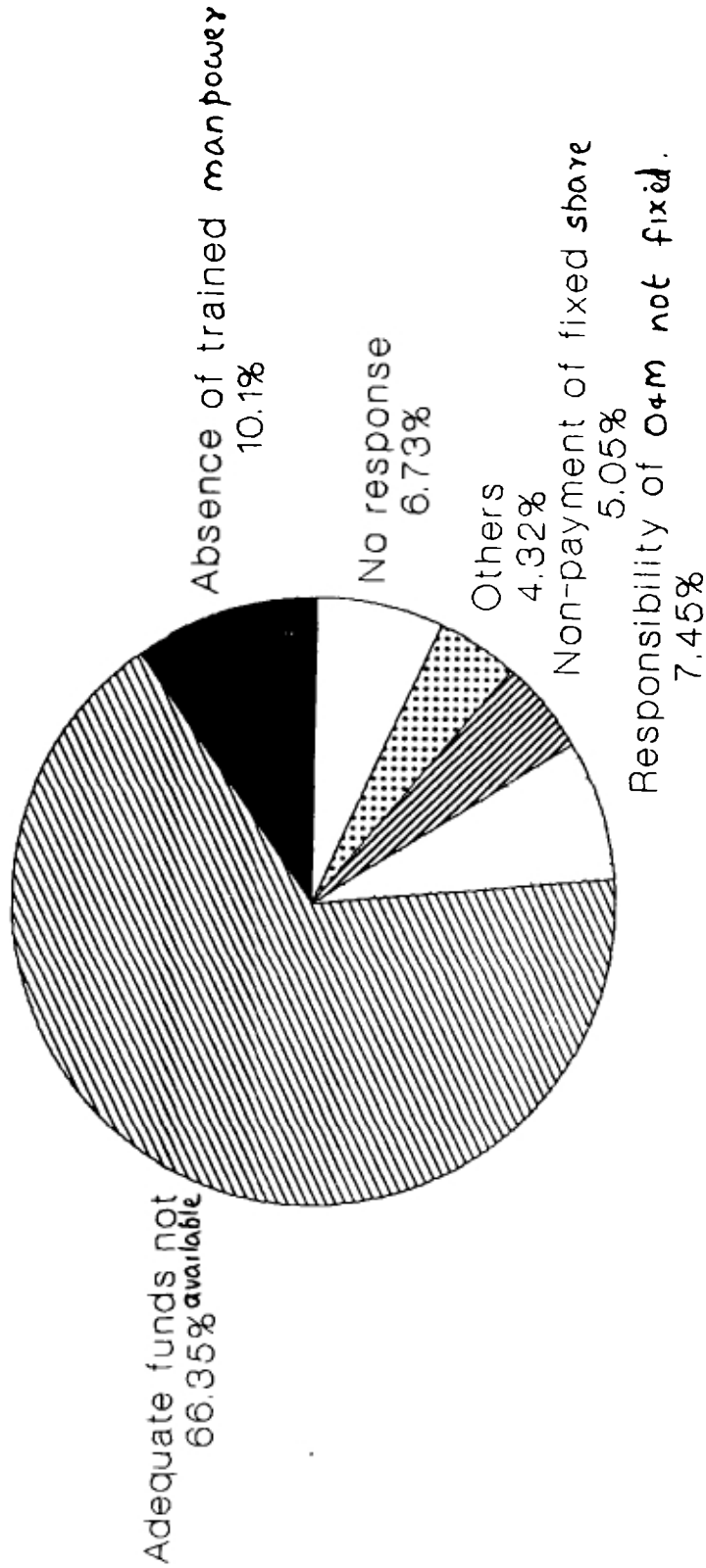
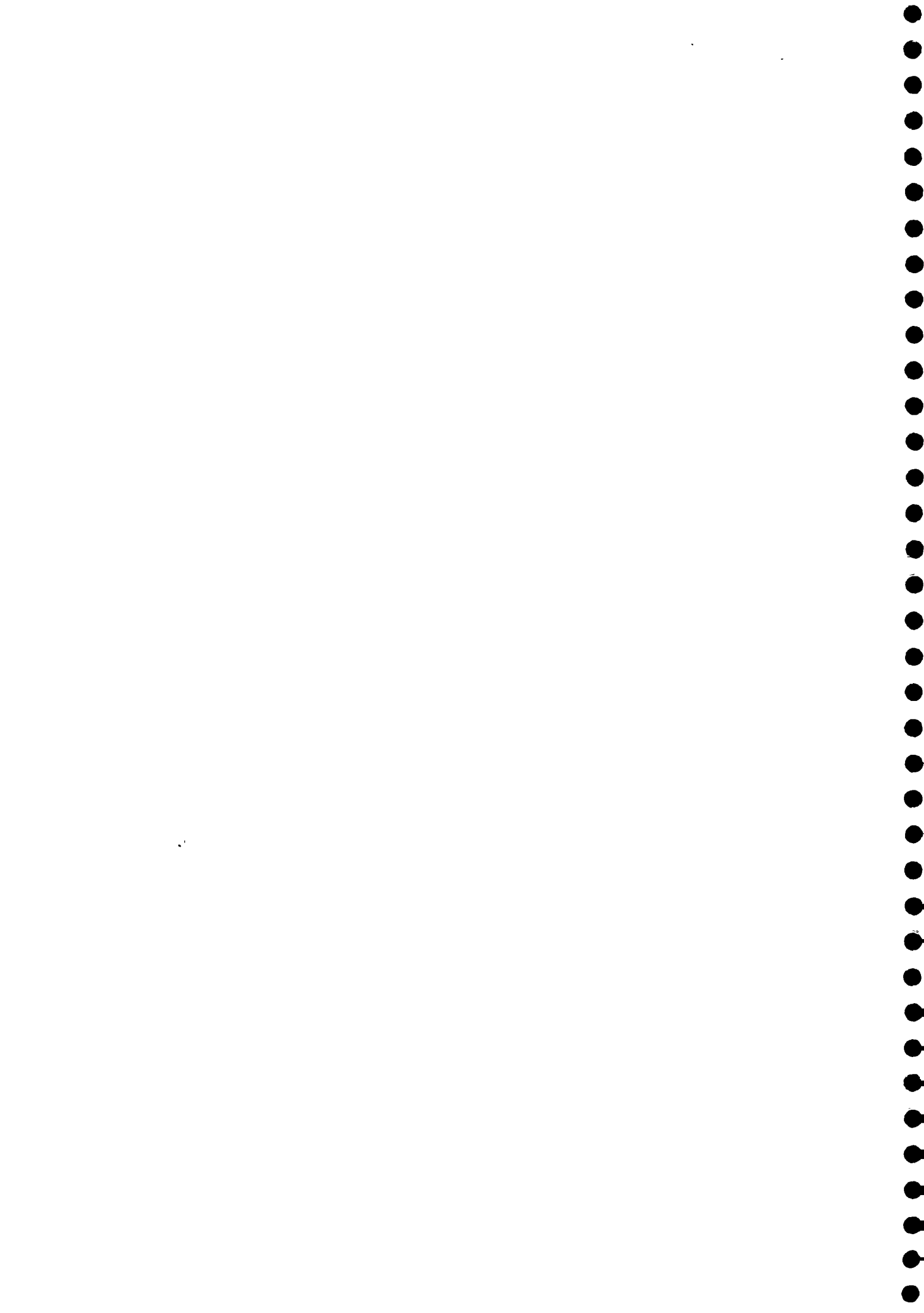


Figure NO. 3.8



# FREQUENCY OF NON-FUNCTIONING OF WATER SOURCE.

45

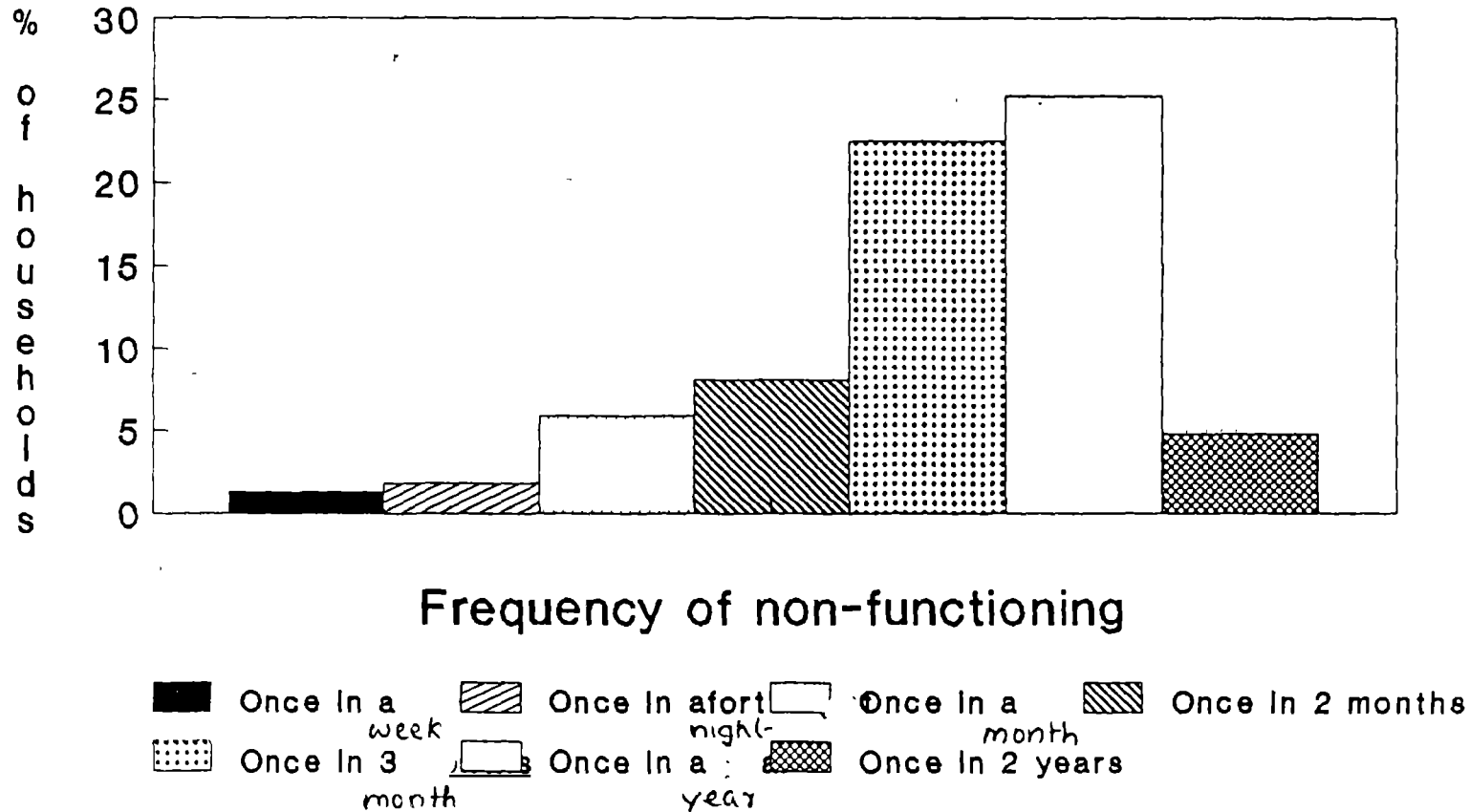
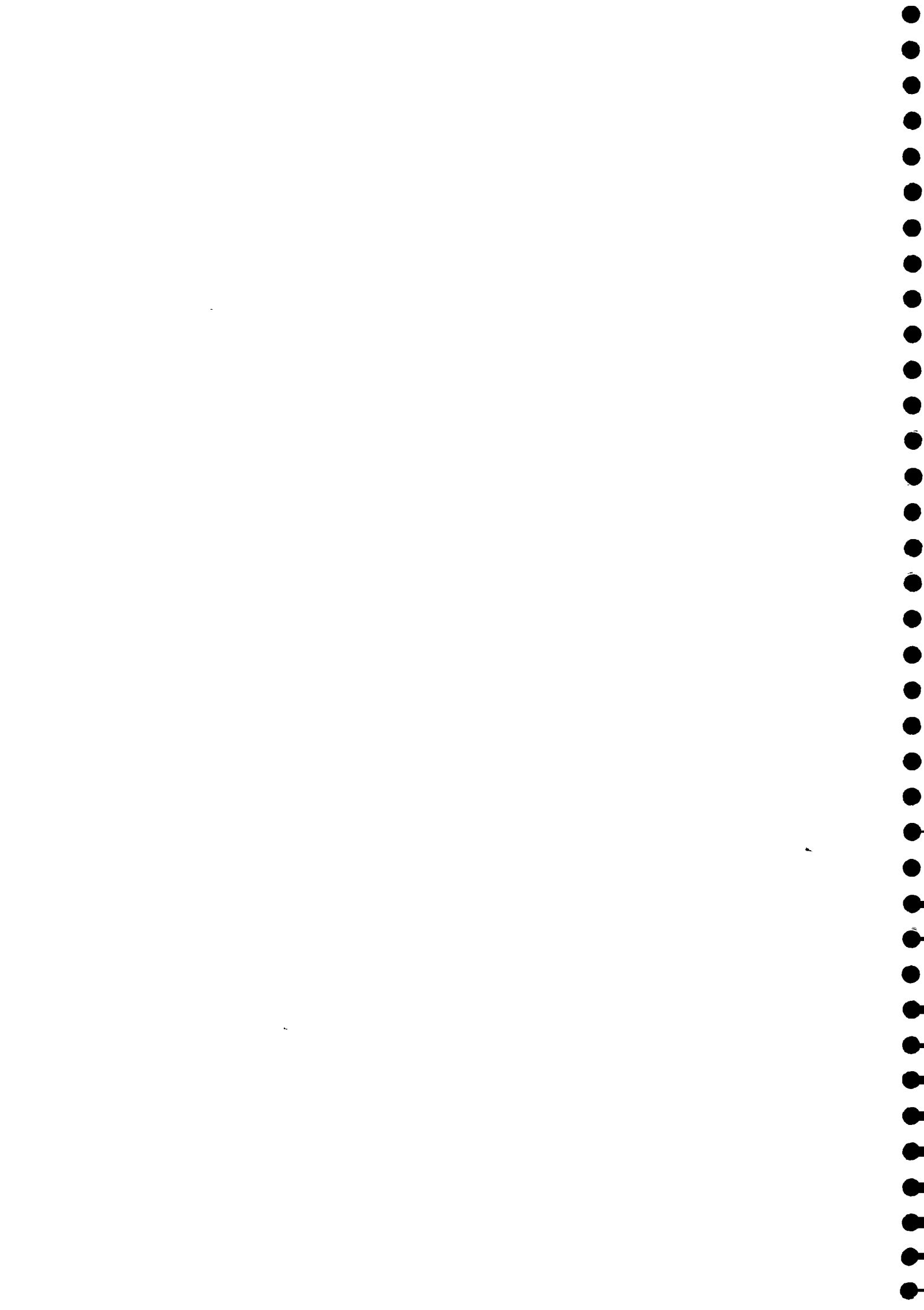


Figure No. 3.9



# OPINION ABOUT THE SHARING PATTERN TO RWSP.

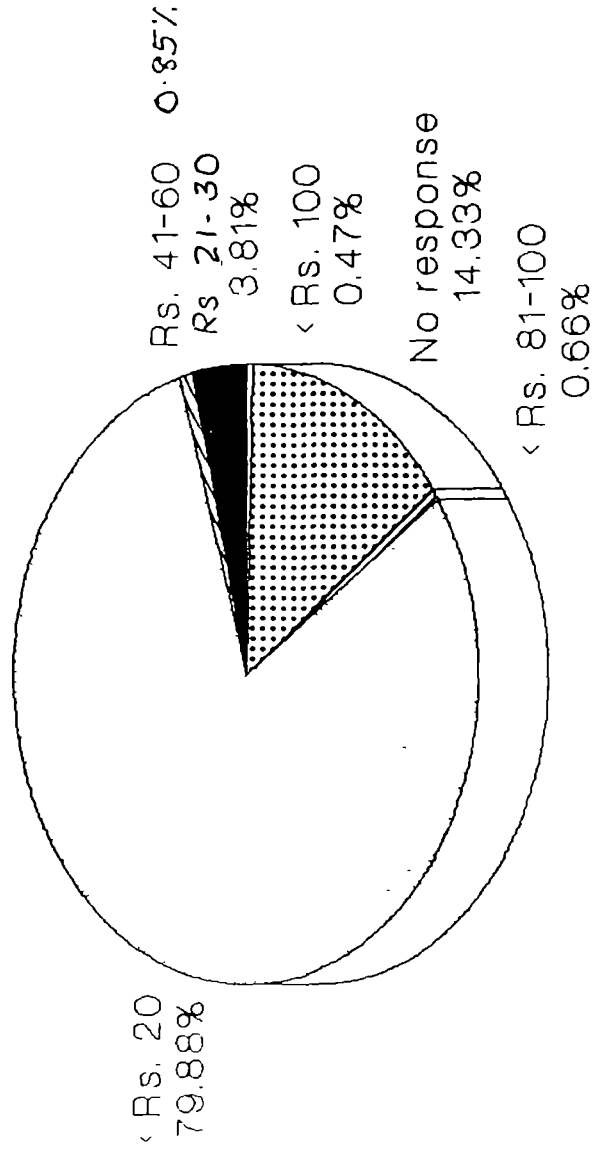
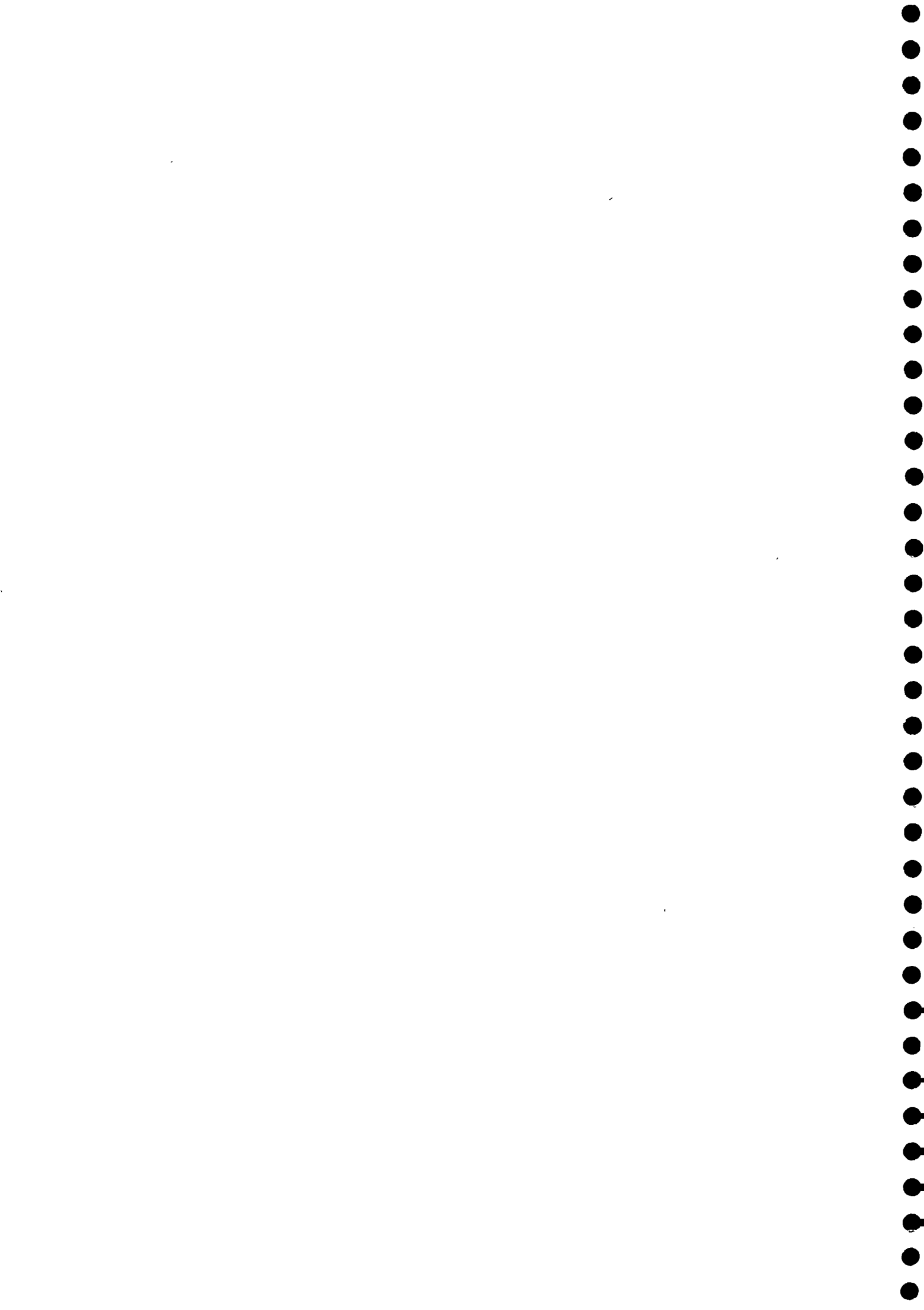


Figure No. 3.10



PART-B

SURVEY FINDINGS - SAMASTIPUR

266 households were surveyed in Samastipur district for data collection. The analysis of the data is given below based on different variables.

Per Capita requirement of water

**For cooking and drinking**

Out of the total 266 households surveyed it is reported that the per capita daily requirement for cooking and drinking for 21.42% households is 0-10 litres of water, for 27.81% households is 10-20 litres, for 18.04% households is 20-30 litres, for 18.79% is 30-40 litres & for 13.9% households is 40-90 litres.

**For washing**

Out of the total 266 households surveyed it is reported that the per capita daily requirement for washing purpose for 2.25% households is upto 10 litres of water, for 21.05% households is 10-20 litres, for 22.93% households is 20-30 litres, for 22.55% households is 30-40 litres, for 15.4% households is 40-50 litres, for 37.5% households is 50-60 litres, for 12% households is 60-140 litres.

**Total per capita requirement of water for cooking and washing**

The total per capita daily requirement of water for both cooking/drinking and washing clothes, etc. of 7.89% households is 10-20 litres, of 11.54% households is 20-30 litres, of 18.04% households is 30-40 litres, of 12.03% households is 40-50 litres, of 8.27% households is 50-70 litres, of 18.03% households is 70-100 litres, of 11.26% households is 100-110 litres, per capita requirement of 3.38% households is above 100 litres of water.

Requirement of water for animals

0.37% households have reported that they require 50 litres of water daily, 1.5% households have reported that they require 100-150 litres of water daily, 1.5% households have reported that they require 151-200 litres of water daily, 3.38% households require 201-250 litres of water daily, 3.38% households require 251-300 litres of water, 4.51% households require 301-350 litres of water, 6.01% households require 351-400 litres of water daily, 8.64% households require 401-450 litres of water, 7.51% households require 451-500 litres of water and 42.48% households require more than 500 litres of water daily. (Refer Table No. 3.22 also).

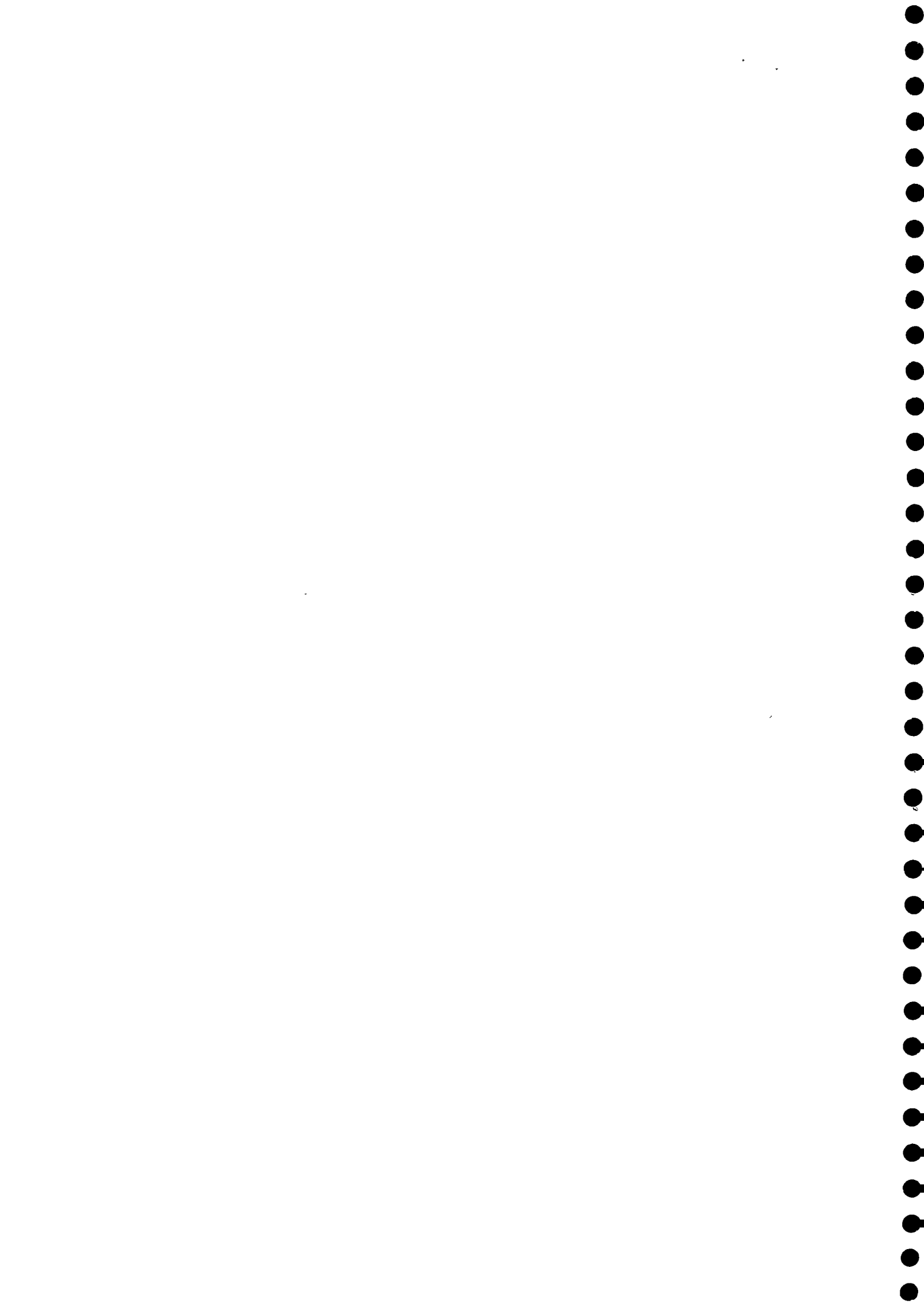




TABLE NO. 3.22

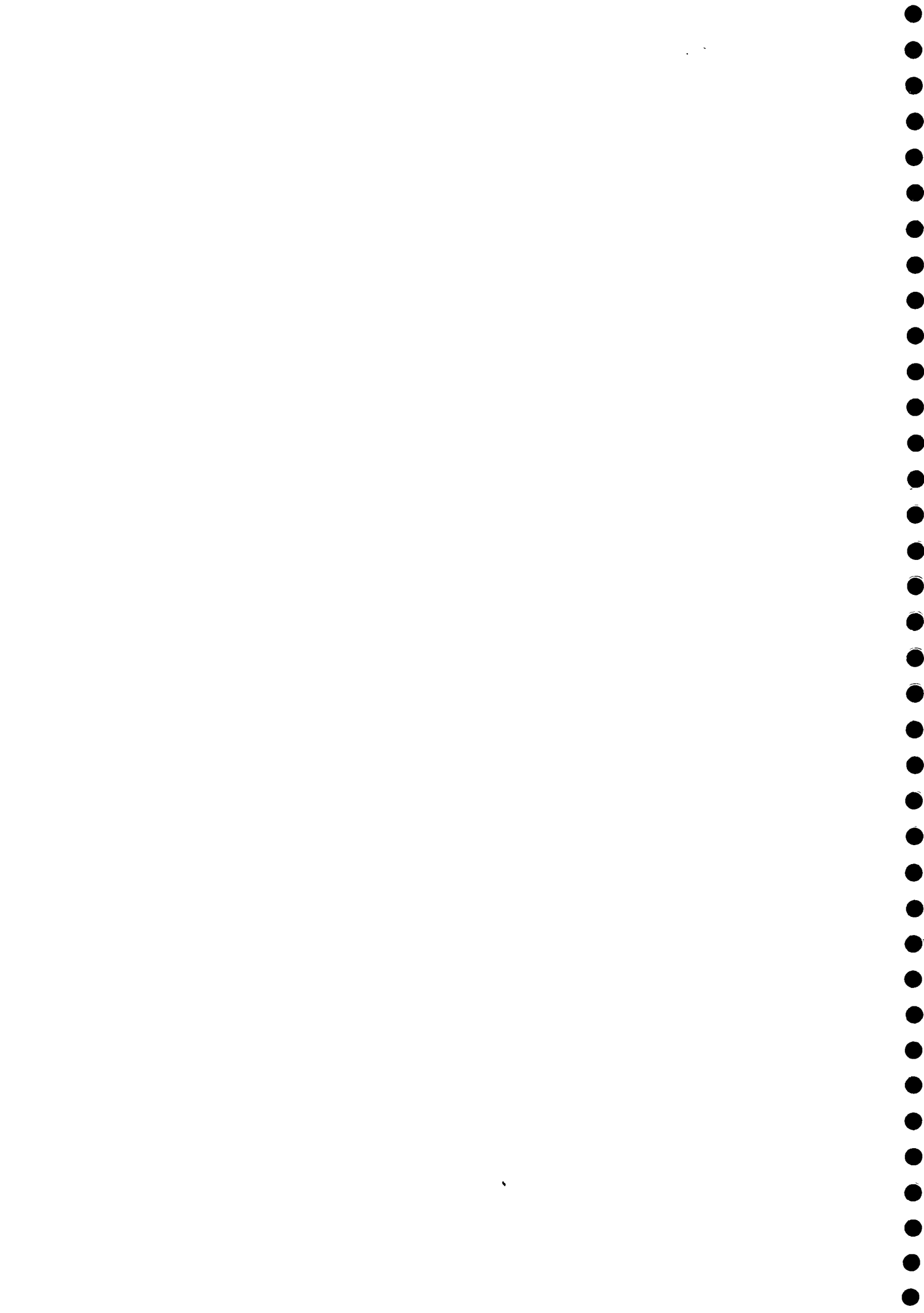
DISTRIBUTION OF HOUSEHOLDS ACCORDING TO  
PER CAPITA REQUIREMENT OF WATER

<u>PER CAPITA REQUIREMENT</u>	<u>COOKING &amp; DRINKING</u>	<u>FOR WASHING</u>	<u>TOTAL</u>
0-10	57	6	0
10-20	74	56	21
20-30	48	61	44
30-40	50	60	48
40-50	27	41	32
50-60	-	10	22
60-70	4	11	21
70-80	4	16	11
80-90	2	-	26
90-100	-	-	11
100-110	-	1	7
110-120	-	1	9
120-130	-	1	3
130-140	-	2	-
140-150	-	-	2
>150	-	-	9

Sources and problems before rural water supply programme

Sources for cooking and drinking

Out of the total 266 households surveyed, 58.27% households have reported that they used to fetch water from the community well, 8.64% households have reported that they used to fetch water from their own well, 36.46% households have reported that they used to fetch water from other natural sources like springs.



**For washing clothes**

54.51% households have reported that for washing clothes they used the water from the community well, 9.39% households have reported that they used the water of their own well, 1.5% households have reported that they used the water from the pond, 6.39% households have reported that they used the water from river and 10.56% households have reported that they used the water from other natural sources.

**For animals**

25.56% households have reported that for animals they used the water from the community well, 8.64% households have reported that they used the water of their own well, 10.15% households have reported that they used the water from the pond, 1.87% households have reported that they used the water from the lake, 20.3% households have reported that they used the water from river and 22.93% households have reported that they used the water from other sources for this purpose. (Refer Table No. 3.23 also).

TABLE NO. 3.23

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO SOURCES OF WATER SUPPLY BEFORE RURAL WATER SUPPLY PROGRAMME

PURPOSE	SOURCE					
	COMMUNITY WELL	OWN WELL	POND	LAKE	RIVER	OTHERS
FOR COOKING & DRINKING	155	23	-	-	-	97
FOR WASHING CLOTHES	145	25	4	-	17	91
FOR ANIMALS	68	23	27	5	54	61

Fetching water for household purpose

Out of the total 266 households surveyed, 1.5% households have reported that only female fetch water, 2.25% households have reported that only male fetch water & 96.24% households have reported that both male and female fetch water for household purpose. (Refer Table No.3.24 also).

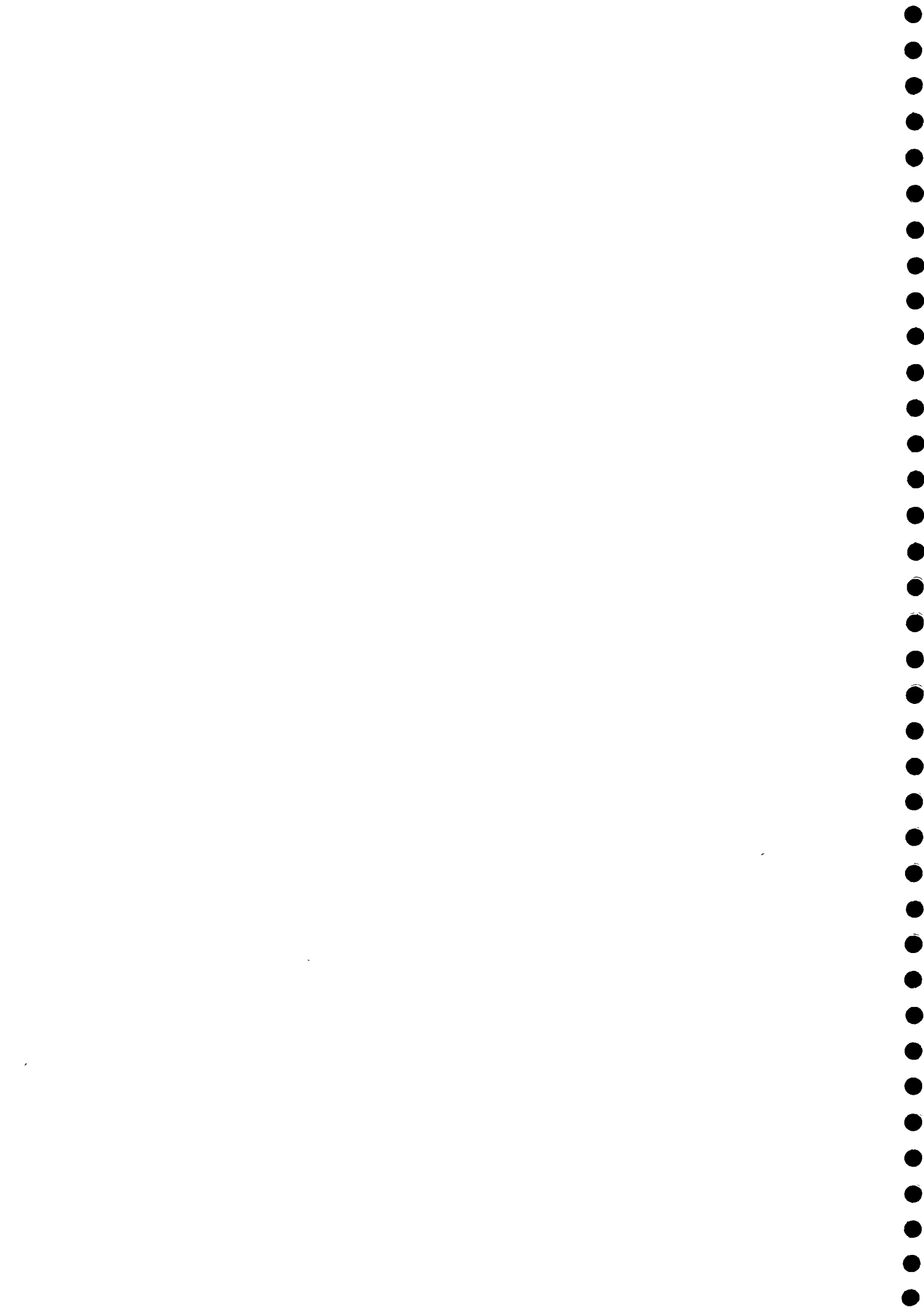


TABLE NO. 3.24

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO  
FETCHING WATER FOR HOUSEHOLD PURPOSE

<u>ONLY FEMALE</u>	<u>ONLY MALE</u>	<u>MALE &amp; FEMALE</u>
4	6	256

Time taken and distance covered in bringing water

97.36% households have reported that they took 30 minutes to bring water, 2.25% households have reported that they take 31-45 minutes to bring water,

54.88% households have reported that they bring water from a distance of 50 mts, 26.69% households have reported that they bring water from a distance of 51-100 mts, 11.65% households have reported that they bring water from a distance of 101-200 mts, 5.26% households have reported that they bring water from a distance of 201-500 mts & 1.12% households have reported that they bring water from a distance of 501-1000. (Refer Table No. 3.25 also).

TABLE NO. 3.25

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO DISTANCE  
COVERED AND TIME TAKEN TO BRING WATER

<u>TIME IN MINUTES</u>	<u>DISTANCE OF METRES</u>					
	<u>UPTO 50</u>	<u>51-100</u>	<u>101-200</u>	<u>201-500</u>	<u>501-1000</u>	<u>&gt;1000</u>
<u>UPTO 30</u>	146	71	28	11	3	-
<u>31-45</u>	-	-	3	3	-	-

Problems in getting water before rural water supply programme

The surveyed households were asked about the main problems they faced in getting water before rural water supply programme. 34.96% households have reported that sources of water used to get dried up at times, 28.94% households have reported that they used to get dirty / unhygeinic water, 25.56% households have reported that adequate quantity was not available, 21.8% households have reported that the water source was at a very long distance 3% households have reported that there was irregular supply/availability of water and 4.88% households have reported some other problems also. (Refer Table No 3.26 also).

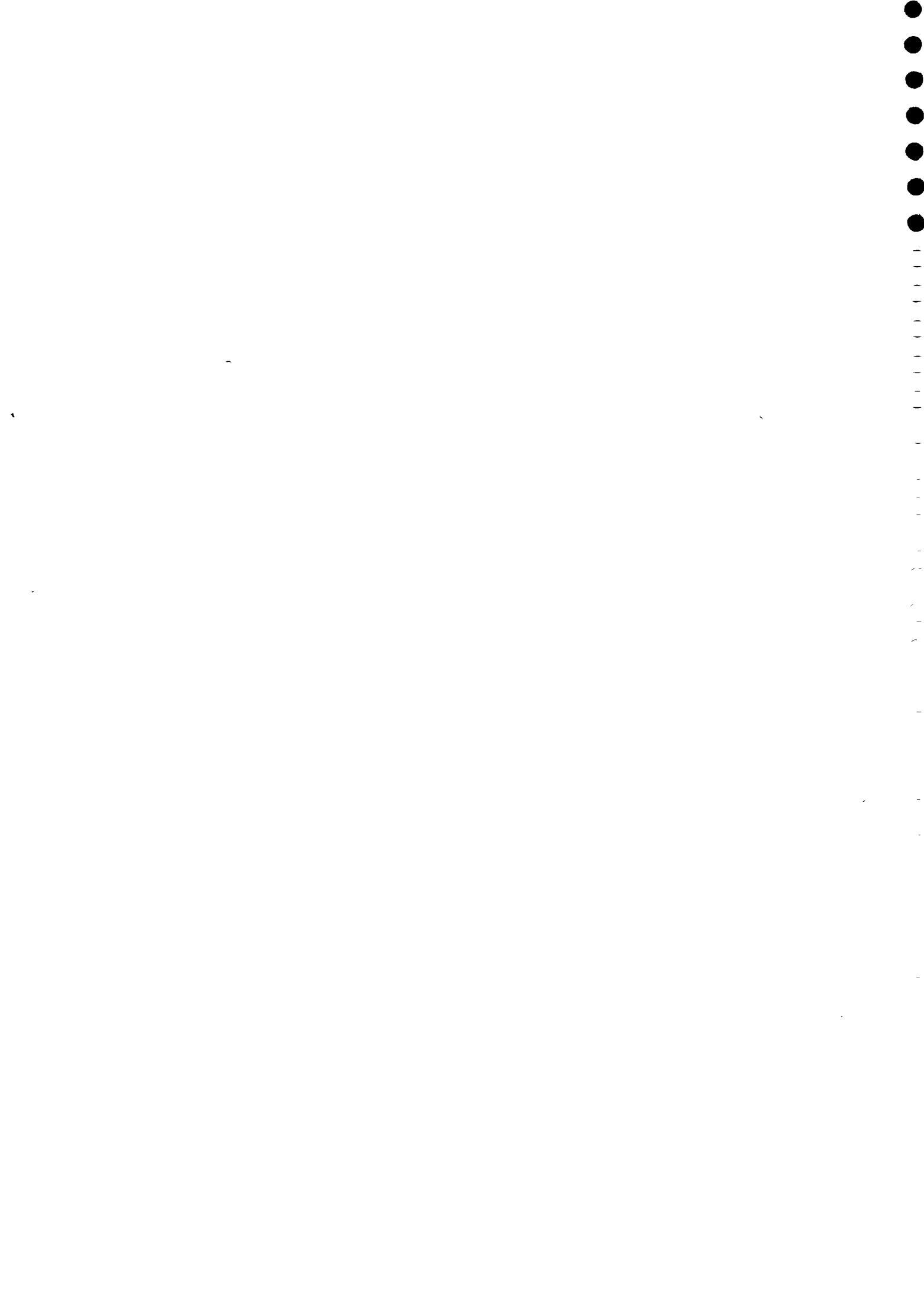


TABLE NO. 3.26

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO PROBLEMS IN GETTING WATER BEFORE RURAL WATER SUPPLY PROGRAMME

PROBLEMS	NO. OF HOUSEHOLDS
Sources of water used to get dried up at times	93
Water available was unhygeinic	77
Adequate quantity of water not available	68
Distance to the source of water was long	58
Irregular supply/availability	8
Any other	13

Current Water sources after rural water supply programme

Out of the government water supply sources it is reported that 77.44% households use water from hand pumps. Out of the non-government water supply sources, it is reported that 23.68% households use water from community wells, 17.66% households use water from their own well, 5.26% households use water from ponds, 5.26% households use water from rivers and 54.13% households use water from other private sources like self pumps.

Distance of water source

22.55% households have reported that the hand pumps are at a distance of 0-50 mts, 28.57% households have reported that it is at a distance of 51-100 mts from their residence, 9.02% households have reported that it is at a distance of 101-150 mts, 9.39% households have reported that it is at a distance of 151-200 mts, 6.39% households have reported that it is at a distance of 201-500 mts & 1.37% households have reported that it is at a distance of 501-1000 mts.

12.03% households have reported that the community well is at a distance of 0-50 mts, 10.52% households have reported that it is at a distance of 51-100 mts from their residence, 7.51% households have reported that it is at a distance of 101-150 mts, 9.39% households have reported that it is at a distance of 151-200 mts, 6.38% households have reported that it is at a distance of 201-500 mts & 0.37% households have reported that it is at a distance of 501-1000 mts.





0.37% households have reported that the river is at a distance of 0-50 mts, 0.37% households have reported that it is at a distance of 51-100 mts from their residence, 0.75% households have reported that it is at a distance of 101-150 mts, 0.75% households have reported that it is at a distance of 151-200 mts, 3% households have reported that it is at a distance of 201-500 mts & 5.63% households have reported that it is at a distance of 501-1000 mts. (Refer Table No. 3.27 also).

TABLE NO. 3.27

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO CURRENT SOURCE OF WATER SUPPLY AND QUALITY OF WATER

SOURCE	QUALITY		DISTANCE IN METRES					
	DRINKABLE	NON-DRINKABLE	0-50	51-100	101-150	151-200	201-500	501-1000
Hand pump	206	26	60	76	24	25	17	1
Community well	63	62	15	52	34	11	3	-
Own well	47	62	32	28	20	6	3	-
Pond	14	20	-	-	7	8	2	-
River	14	13	1	1	2	2	8	15
Others	144	5	69	46	7	4	-	-

Problems after rural water supply programme

Though there are water sources like community well, self / own wells, pond and river, 9.77% households have reported that the tube wells are not in working condition or the water from the tube wells is not good for drinking, 23.3% households have that the water from the community wells is not good for drinking, 23.3% households have reported that the self / own wells are also not in good condition, 7.51% households have reported that water from the pond is not good for drinking and 4.88% households have reported that the river water is also not good for drinking.

37.96% households have reported that there is no problem for them in getting water while, 62.03% households have reported some problems even after the implementation of rural water supply programme. Out of these 37.96% households, 45.54% households have reported that sources of water used to get dried up at times, 34.65% households have reported that they will not get adequate quantity of water, 32.67% have reported that the water sources is at a very long distance, 12.87% households have reported that they get dirty/unhygienic water, 0.9% households have reported that there is irregular supply of water daily and 3.96% households have reported that people belonging all the castes were not allowed to take water from the water source. (Refer Table No. 3.28 also).



TABLE NO. 3.28

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO THE PROBLEMS REPORTED

<u>PROBLEMS</u>	<u>NO. OF HOUSEHOLDS</u>
Sources of water used to get dried up at times	46
Adequate quantity of water not available	35
Distance of source of water was long	33
Unhygeinic water was available	13
All caste were not allow to take water from the water source everytime	4
Irregular supply daily	1

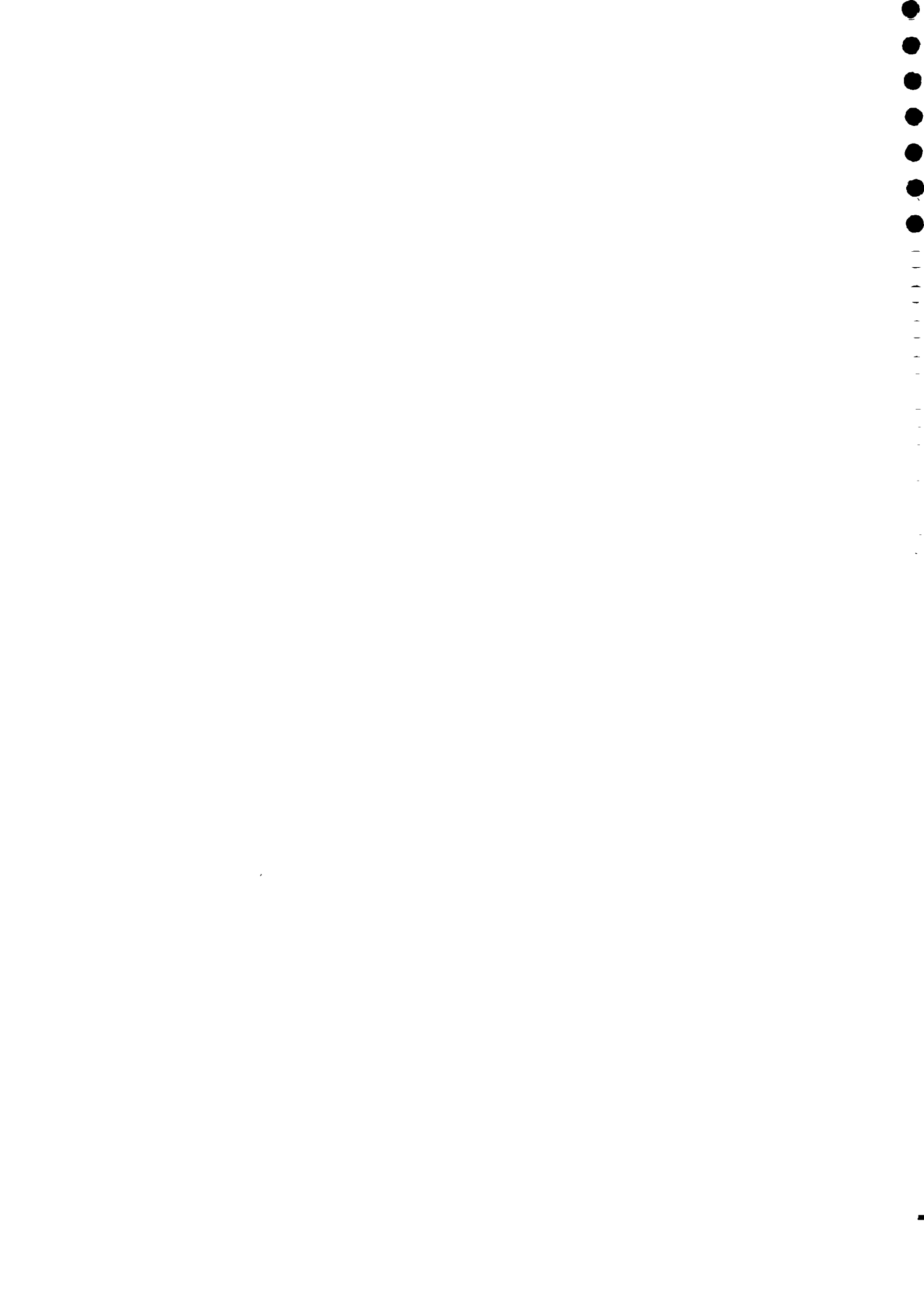
Duration of scarcity period of water supply after rural water supply programme

Out of the total 266 households surveyed, 47% households have reported that there will be scarcity of water for 1-2 months, 11.65% households have reported that there will be scarcity of water for 3-4 months, 1.5% households have reported that there will be scarcity of water for 5-6 months, 0.75% households have reported that there will be scarcity of water for 9-10 months and 0.76% households have reported that there will be scarcity of water for 11-12 months. (Refer Table No. 3.29 also).

TABLE NO. 3.29

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO DETAILS OF WATER SOURCES AND PROBLEMS AFTER ARWSP

<u>PERIOD (IN MONTHS)</u>	<u>NO. OF HOUSEHOLDS</u>
1-2	125
3-4	31
5-6	4
7-8	-
9-10	2
11-12	2



The quantity of Water available during scarcity & non-scarcity period

**For cooking and drinking**

The daily per capita availability of water for cooking and drinking of 22.18% households is upto 10 litres, of 26.31% households is 10-20 litres, of 21.05% households is 20-30 litres, of 13.53% households is 40.90 liters of water.

The daily per capita availability of water during non-scarcity period of 14.66% households is upto 10 litres, of 28.19% households is between 10-20 litres, of 19.17% households is between 20-30 litres, of 19.92% households is between 30-40, of 12.03% households is between 40-50 litres and of 4.5% households is between 50-100 litres of water.

**For washing**

The daily per capita availability of 7.89% households for washing purpose is upto 10 litres, of 20.67% households is 10-20 litres, of 25.93% households is 20-30 litres, of 21.8% households is 30-40 litres, of 14.28% households is 40-50 and of 9.36% households is 50-100 litres.

During non-scarcity period the daily per capita availability of 2.25% households is upto 10 litres of water, of 20.3% households is 10-20 litres, of 22.55% households 20-30 litres, of 21.8% households is 30-40 litres, of 19.92% households is 40-50 litres and of 13.1% households is 50-140 litres.

Requirement for animals

During scarcity period according to 15.03% households for animals they get 100 litres of water, according to 13.53% households they get 101-150 litres of water, according to 13.15% households they get 151-200 litres of water, according to 9.77% they get 201-250 litres of water, according to 4.51% households they get 251-300 litres of water, according to 2.63% households they get 301-350 litres of water, according to 0.75% households they get 351-400 litres of water, according to 2.25% households they get 401-450 & according to 0.75% households they get 451-500 litres of water.

During non-scarcity period the availability of water for animals according to 12.03% households for is 100 litres of water, according to 10.15% households is 101-150 litres of water, according to 10.52% households is 151-200 litres of water, according to 13.53% is 201-250 litres of water, according to 6.76% households is 251-300 litres of water, according to 3.38% households is 301-350 litres of water, according to 3% households is 351-400 litres of water, according to 1.87% households is 401-450 & according to 3% households is 451-500 litres of water (Refer Table No. 3.30 also).

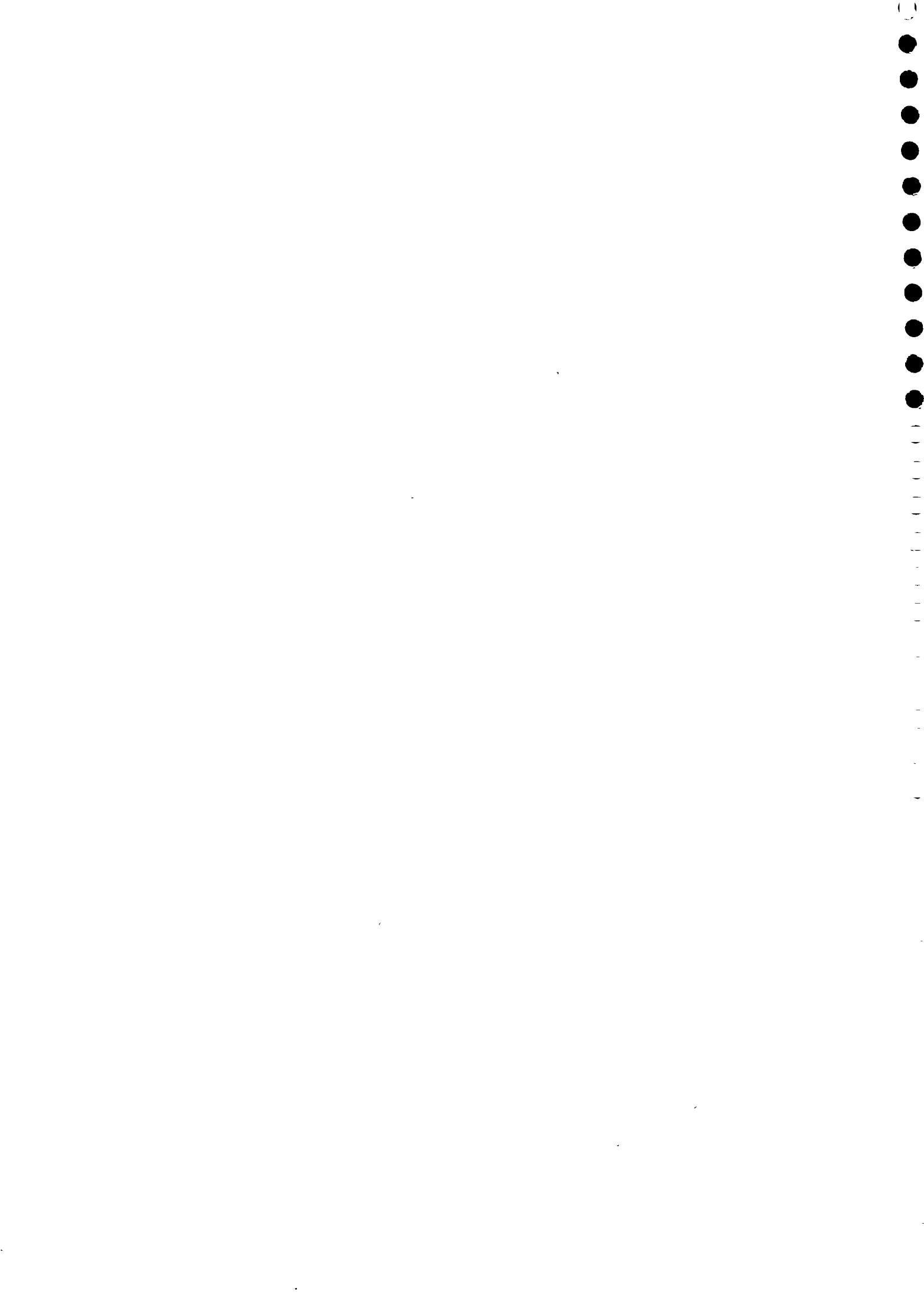


TABLE NO. 3.30

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO CURRENT AVAILABILITY  
OF WATER SUPPLY DURING SCARCITY AND NON-SCARCITY PERIOD

PURPOSE	>100	101-150	151-200	201-350	251-300	301-350	351-400	401-450	451
<u>During Scarcity</u>									
For Cooking	110	57	43	17	13	3	5	2	1
For Washing	41	57	39	50	28	15	12	8	5
For Animals	40	36	35	26	12	7	2	6	2
Total	3	7	5	16	15	11	29	30	70
<u>During Non-Scarcity</u>									
For Cooking	69	82	45	17	17	9	6	6	9
For Washing	17	44	65	48	26	18	17	13	9
For Animals	32	27	28	36	18	9	8	5	8
Total	-	3	1	10	12	12	20	25	109

Operation and Maintenance of Water Source

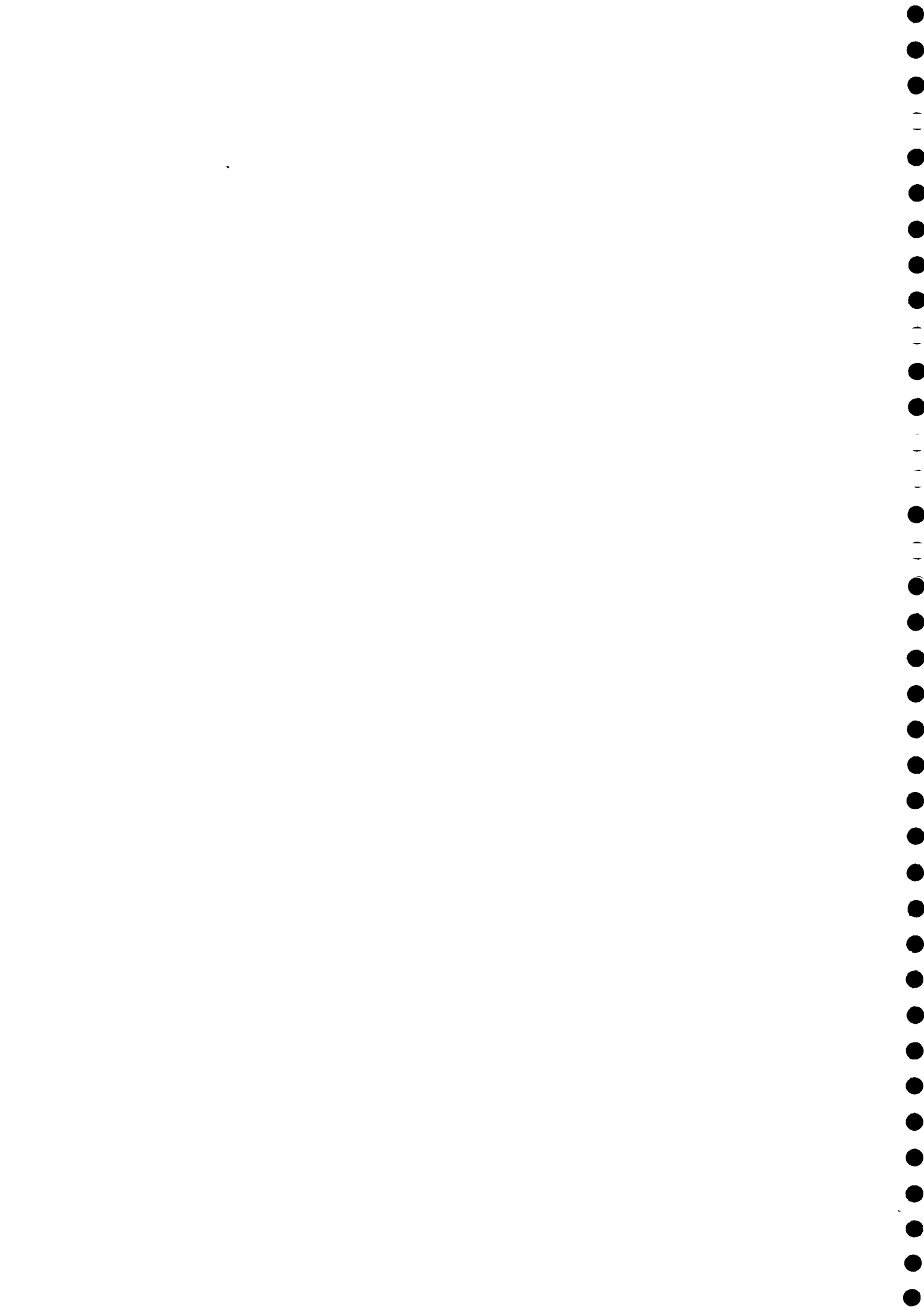
Persons responsible for the operation and maintenance

It is reported that for the operation and maintenance of water source individuals are responsible according to 55.63% households, community is responsible according to 46.61% households, PHED is responsible according to 7.51% households, village panchayat is responsible according to 1.12% households. (Refer Table No. 3.31 also).

TABLE NO. 3.31

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO  
THE PERSONS RESPONSIBLE FOR O & M

REASONS	NO. OF HOUSEHOLDS
Individuals	148
Community	124
PHED	20
Village Panchayat	3





Cost of operation and maintenance of water source

The cost of operation and maintenance of water source is met by individual persons according to 57.14% households, it is met by the community according to 43.23% households, it is met by PHED according to 6.76% households and it is met by the village panchayat according to 0.37% households. (Refer Table No. 3.32 also).

TABLE NO. 3.32

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO THEIR OPINION ABOUT WHOM SHOULD MEET THE COST OF O & M

REASONS	NO. OF HOUSEHOLDS
Individuals	152
Community	115
PHED	18
Village Panchayat	1

Opinion about the present system of operation and maintenance of water source

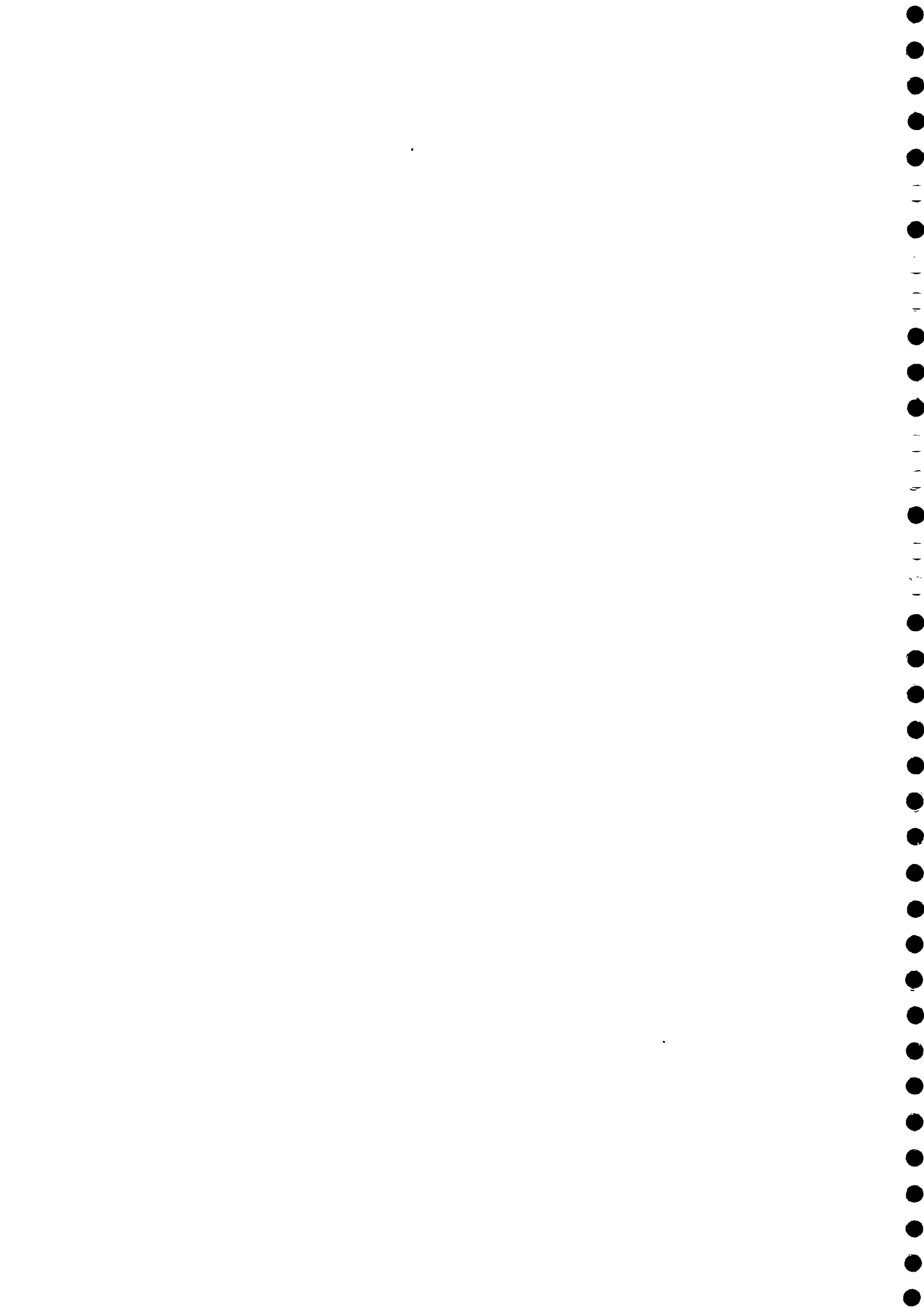
73.3% households were satisfied with the present system of operation and maintenance while 26.69% households were not satisfied with the present water supply system.

Out of 26.69% households who were not satisfied, 29.57% were of the opinion that adequate funds were not available, 19.71% were of the opinion that trained manpower was not there, 15.49% were of the opinion that the responsibility for O & M is not fixed & 15.49% were of the opinion that people did not pay their fixed share. (Refer Table No. 3.33 also).

TABLE NO. 3.33

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO THE REASONS GIVEN FOR THEIR DISSATISFACTION

REASONS	NO. OF HOUSEHOLDS
Adequate funds not available	21
Trained manpower was absent	14
Responsibility of O & M not fixed	11
People not paying their share	11



Functional status of source of water supply

According to 76.69% households hand pumps are functioning properly, according to 10.52% households the hand pumps are not functioning properly and according to 5.26% households the hand pumps are not at all functioning.

Frequent non-functioning of source of water

3% households were of the opinion that the hand pumps stops functioning once in a week, 2.63% households were of the opinion that the hand pumps stops functioning once in a fortnight, 4.13% households were of the opinion that it stops functioning once in a month. 11.27% households were of the opinion that it stops functioning once in 2 months, 30.82% households were of the opinion that it stops functioning once in 3 months, 22.56% households were of the opinion that it stops functioning once in a year & 3.38% households were of the opinion that it stops functioning once in 2 years. (Refer Table No. 3.34 also).

TABLE NO. 3.34

FREQUENCY OF THE SOURCE GOING OUT OF ORDER

<u>FREQUENCY</u>	<u>NO. OF HOUSEHOLDS</u>
Once in a week	8
Once in a fortnight	7
Once a month	11
Once in 2 months	30
Once in a quarter	82
Once in a year	68
Once in 2 years	9

Reasons for non-functioning of the source of water

10.52% households were of the opinion that it is because of the installation of substandard equipments, according to 22.55% households it is because of improper use, according to 20.67% households it is because of damage by miscreants, according to 3.75% households it is because of natural calamities, according to 1.12% households it is because of faulty installation and according 5.26% households it is because of theft of parts. (Refer Table No. 3.35 also).

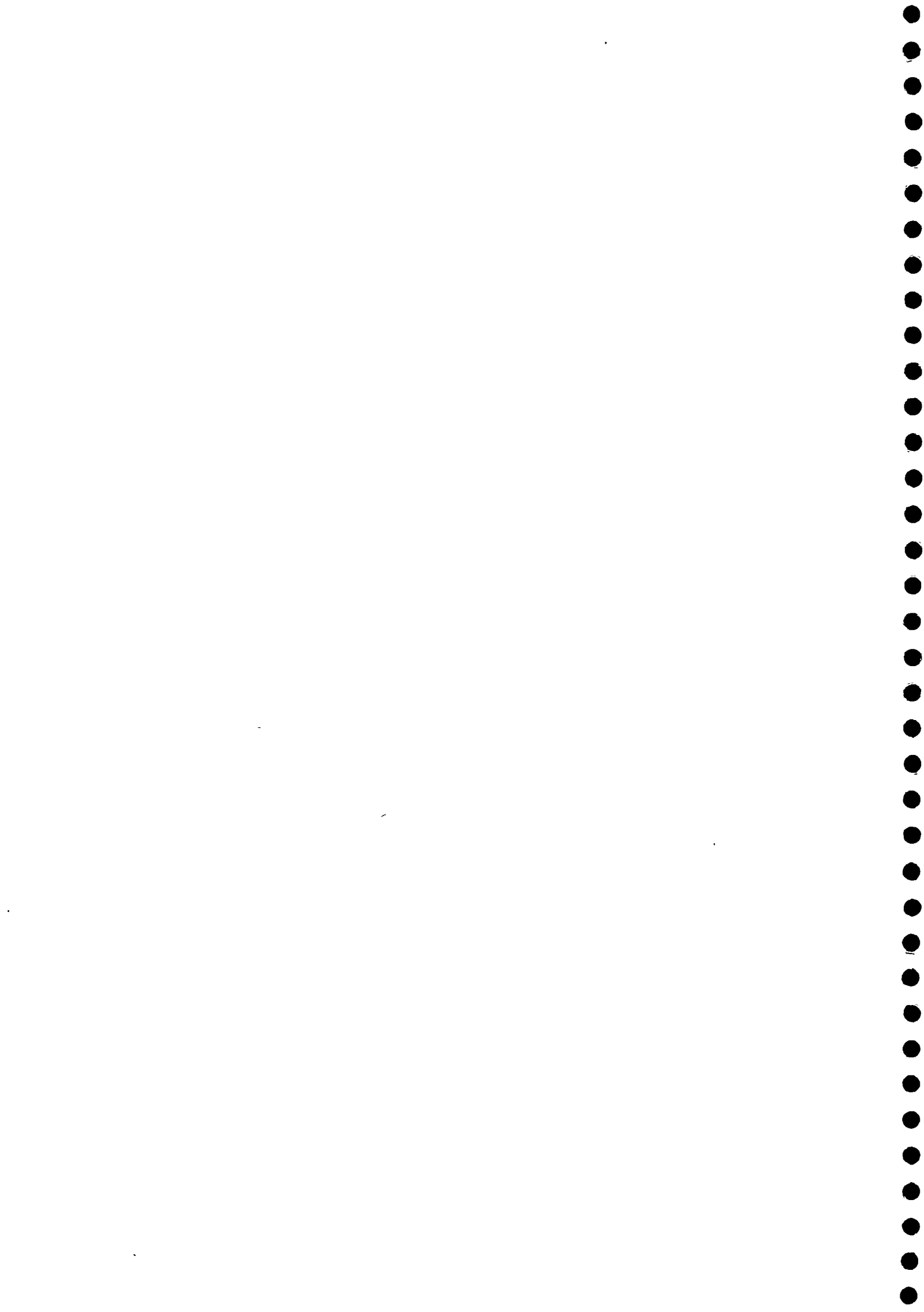


TABLE NO. 3.35

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO REASONS REPORTED  
FOR THE WATER SOURCE GOING OUT OF ORDER

<u>REASONS</u>	<u>NO. OF HOUSEHOLDS</u>
Substandard equipment	60
Improper use	55
Faulty installation	28
Theft of parts	14
Damage due to natural calamities	10
Damage by miscreants	3

Cost for proper and regular water supply

Villager's views were elicited about whom should meet the cost of installation and maintenance for proper and regular water supply. According to 93.6% households government should meet the cost, according to 3.38% households panchayat should meet the cost, according to 0.37% households NGO should meet the cost all to 0.37% households panchayat and government jointly should meet it, according to 1.87% households self/community should meet the cost and according to 1.87% households PHED should meet the cost of installation of water supply sources for proper and regular water supply.

According to 48.12% households government should meet the cost, according to 3% households panchayat should meet the cost, according to 3% households NGO should meet the cost all to 7.14% households panchayat and government jointly should meet it, according to 31.95% households self/community should meet the cost and according to 26.76% households PHED should meet the cost of O & M of water supply sources for proper and regular water supply. (Refer Table No. 3.36 also).

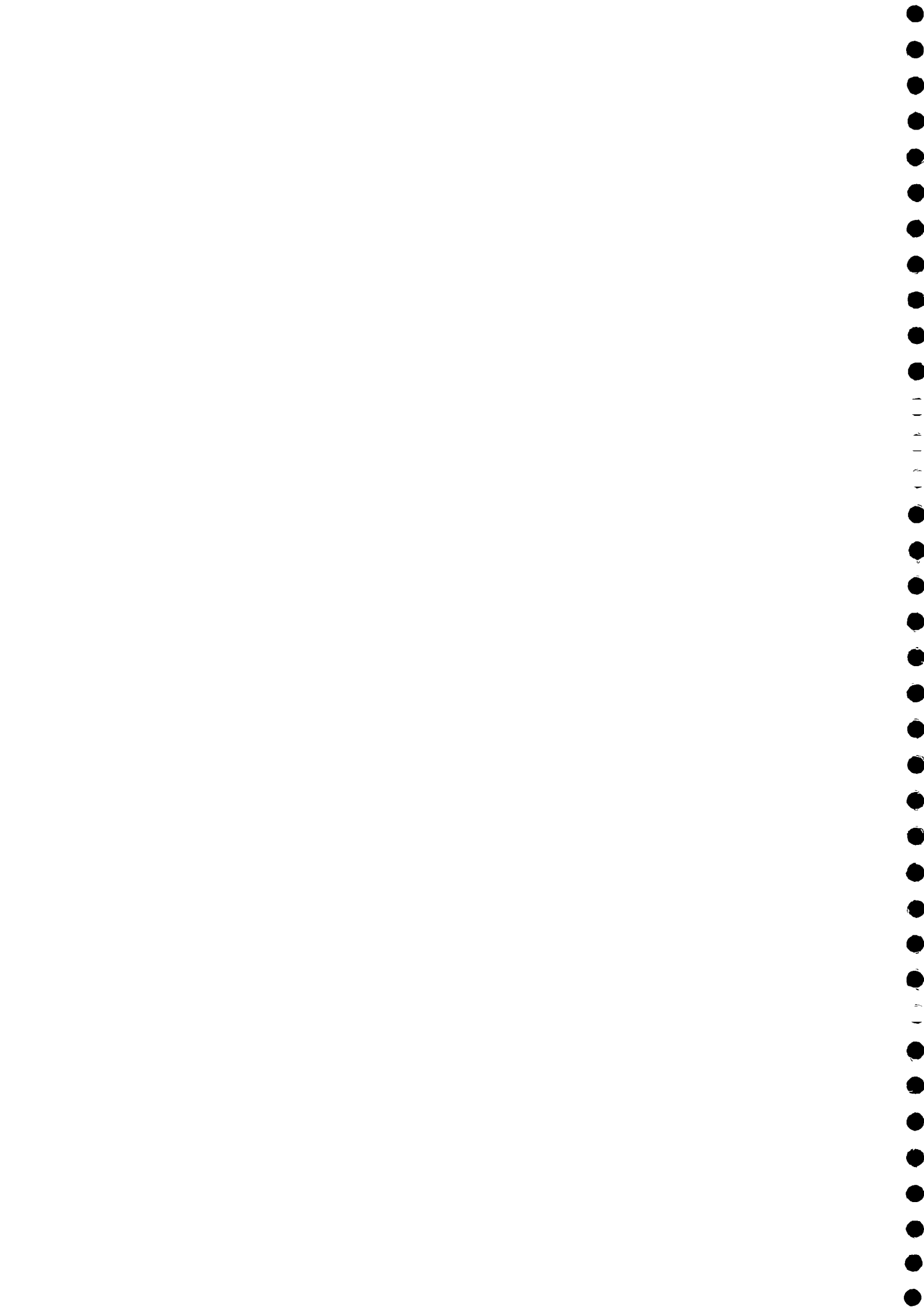


TABLE NO. 3.36

OPINION ABOUT THE PERSON WHOM SHOULD  
MEET THE COST OF WATER SUPPLY

	INSTALLATION	MAINTENANCE
Government	249	128
Panchayat	9	8
Self/Community	5	85
PHED	5	18
NGO	1	8
Government & Panchayat jointly	1	19

Extent and sharing pattern of the cost of installation /  
operation and maintenance

Villager's were asked about their opinion about the sharing pattern of the cost of installation/operation and maintenance. According to 54.51% households there should be equal share per household, according to 32.7% households it should be proportionate to number of family members and according to 4.88% households it should be proportionate to actual water consumption.

82.33% households were of the opinion that the amount should be less than Rs. 20/-, 3.75% were of the opinion that it should be in between Rs. 21-40/-, 2.25% were of the opinion that it should be in between Rs. 41-60/-, 2.25% were of the opinion that it should be in between Rs. 81-100/- and according to 0.75% households it should be less than Rs. 100/-.

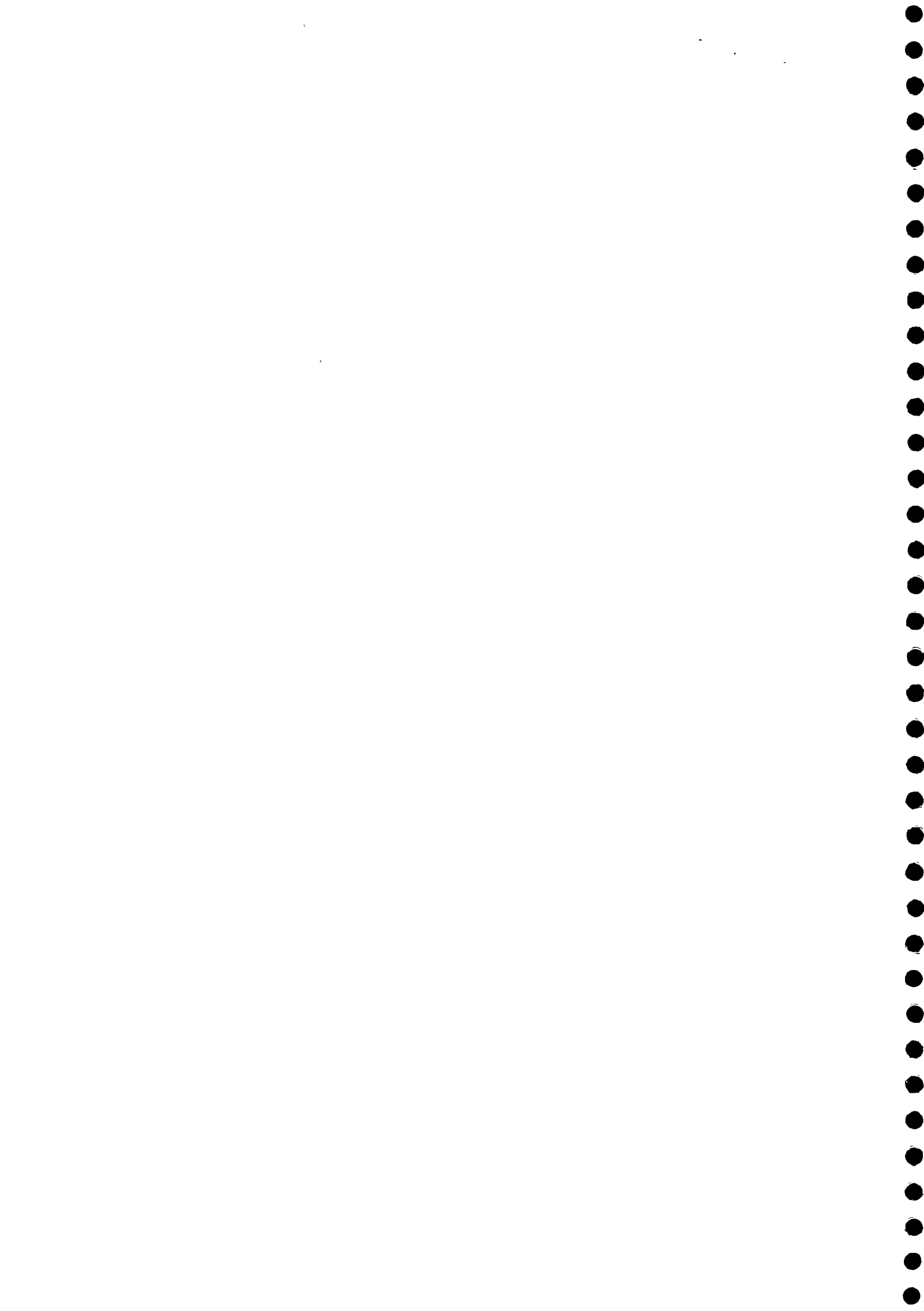
Contribution for the implementation water source

It is reported that 27.06% households have contributed some amount and 72.93% households have not made any financial contribution for the implementation of water source.

Out of the 27.06% households who have contributed some amount, it is reported that 6.9% households have contributed an amount below Rs. 100/-, 4.16% households have contributed Rs.101-300, 6.9% households have reported that they contributed Rs. 301-500, 38.88% households have reported that they contributed Rs. 501-1000/ & 40.27% households have reported that they contribute more than Rs. 1000/-.

Status of Hygienic Conditions around Water source

18.79% households have reported that hygienic condition is not





maintained around the water source and 81.2% households have reported that hygienic condition is maintained around the water source.

Out of the 18.79% households who felt that hygienic condition is not maintained around the water source, 48% households felt that it is because there was no proper drainage system, 12% households felt that it is because the location was not proper, 26% households felt that it is because necessary repairs are not done, 20% households felt that it is because cleanliness is not maintained properly & 8% households felt that it is because of some other reasons.

#### Quality of the water supply

Villagers were asked about the quality of water available for cooking and drinking. But they were unable to express whether they are getting hygienic or unhygienic water. Because of the lack of awareness they were unable to differentiate the quality of water. They use all types of water for cooking and drinking without checking its quality. Thus 92.48% households were of the opinion that the water supplied is fit for drinking while 7.51% households were of the opinion that it is not fit for drinking.

3% households have reported that there is facility for checking / testing water in their village and 97.36% households have reported that there is no such facility in their village.

0.37% households were of the opinion that there is the facility for testing water near by their village while 99.62% households said there is no such facility near by their village.

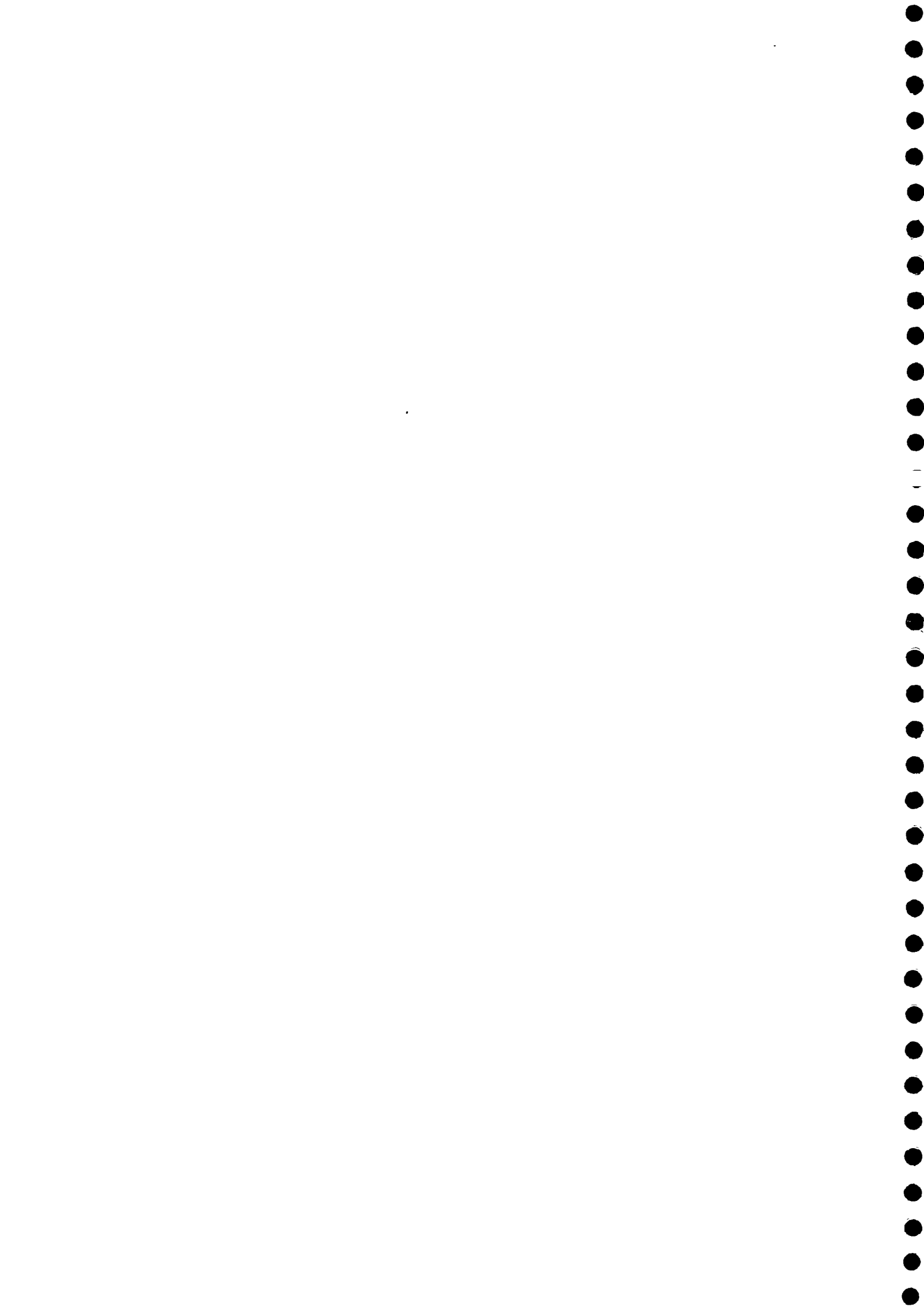
#### Testing of drinking water or pollution check

Around 98.49% households have reported that there is no regular checking of drinking water.

Out of the 98.49% households who have reported that there is no regular checking of drinking water in their village, 13.74% households felt that it is because checking is not done in time, 68.7% households felt that there is no facility for checking drinking water, 6.1% felt that it is not sure that clean water is coming through water sources or not, 1.14% households felt that there is leakage in pipe lines and 14.5% households felt that cleanliness is not maintained around the water source.

#### Water borne diseases after rural water supply programme

The occurrence of water borne diseases like diarrhoea decreased according to 28.57% households and not changed according to 5.26% households. The occurrence of cholera decreased according to 40.22% households and not changed according to 2.63% households. The occurrence of typhoid decreased according to 22.55% households and not changed according to 5.26% households. The

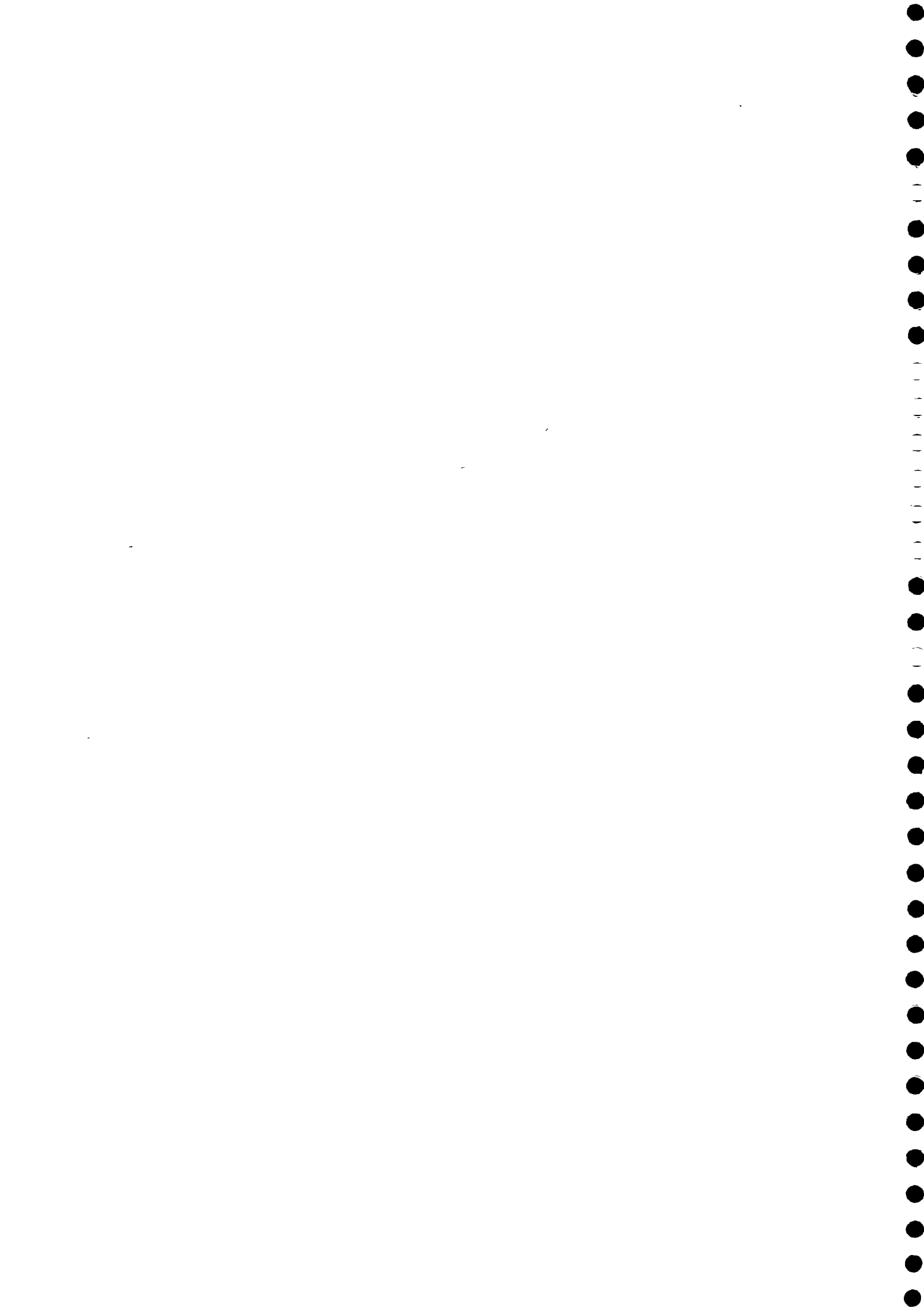


occurrence of malaria decreased according to 21.05% households, increased according to 12.78% households and not changed according to 21.8% households, skin diseases decreased according to 1.87% households and other diseases decreased according to 6.01% households. (Refer Table No. 3.37 also).

TABLE NO. 3.37

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO OCCURRENCE  
OF WATER BORNE DISEASES

DISEASES	DECREASED	NO CHANGE	INCREASED
Diarrhoea	76	14	1
Cholera	107	7	1
Typhoid	60	14	3
Malaria	56	58	34
Skin infection	5	3	-
Others	16	2	12



SURVEY FINDINGS - GAYA

256 households were surveyed in Gaya district for data collection. The analysis of the data is given below based on different variables.

Per Capita requirement of water

**For cooking and drinking**

Out of the total 256 households surveyed it is reported that the daily per capita requirement for cooking and drinking of 34.92% households is upto 10 litres of water, of 36.9% households is 10-20 litres, of 15.07% households is 20-30 litres, of 8.33% is 30-40 litres & of 6.33% households is 40-90 litres.

**For washing**

Out of the total 256 households surveyed it is reported that daily the per capita requirement for washing purpose of 4.68% households is upto 10 litres of water, of 25.39% households is 10-20 litres, of 35.15% households is 20-30 litres, of 19.14% households is 30-40 litres, 9.37% households is 40-50 litres & of 6.24% households is 50-100 litres.

**Total per capita requirement of water for cooking and washing**

The total daily per capita requirement of water for both cooking\ drinking and washing, etc. of 11.71% households is 10-20 litres, of 19.53% households is 20-30 litres, of 26.17% households is 30-40 litres, of 14.06% households is 40-50 litres & of 6.64% households is 50-70 litres, of 14.43% households is 70-150 litres.

Requirement of water for animals

7.42% households have reported that they require 50 litres of water daily, 10.93% households have reported that they require 50-100 litres of water daily, 11.32% households have reported that they require 100-150 litres of water daily, 16.79% households have reported that they require 151-200 litres of water daily, 8.2% households require 201-250 litres of water daily, 5.07% households require 251-300 litres of water & 1.5% households require 301 more than litres of water. (Refer Table No.3.38 also).

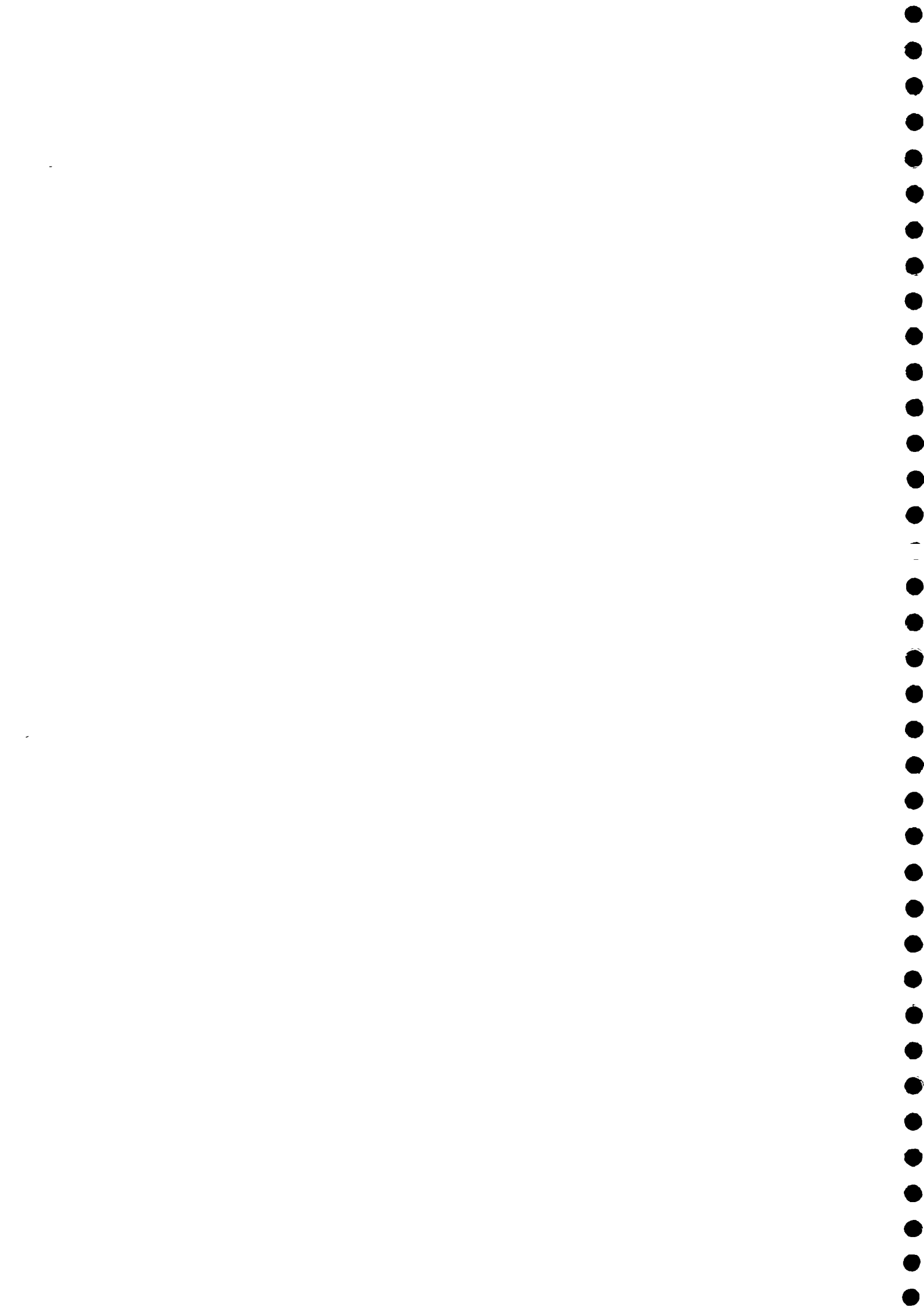


TABLE NO. 3.38

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO  
PER CAPITA REQUIREMENT OF WATER

<u>PER CAPITA REQUIREMENT</u>	<u>COOKING &amp; DRINKING</u>	<u>FOR WASHING</u>	<u>TOTAL</u>
0-10	88	12	0
10-20	93	65	30
20-30	38	90	50
30-40	21	49	67
40-50	5	24	36
50-60	1	1	17
60-70	0	1	19
70-80	10	11	12
80-90	-	2	7
90-100	11	1	2
100-110	3	-	-
110-120	2	-	3
120-130	2	-	3
130-140	4	-	-
140-150	5	-	10

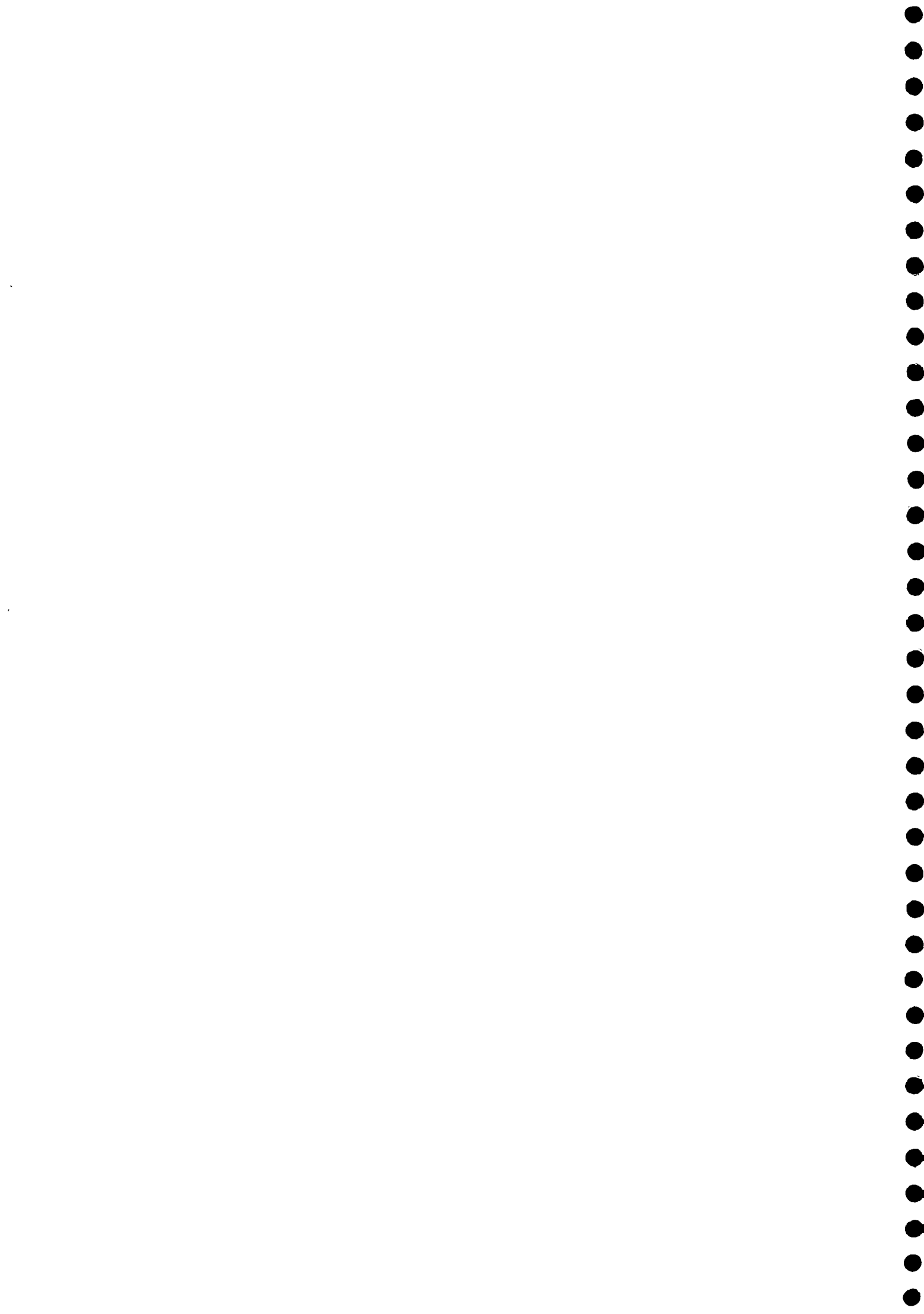
Sources of water supply before rural water supply programme

**Sources for cooking & drinking**

Out of the total 256 households surveyed, 60.93% households have reported that they used to fetch water from the community well, 13.67% households have reported that they used to fetch water from their own well, 0.37% households have reported that they used to fetch water from pond, 1.56% households have reported that they used to fetch water from rivers and 28.51% households have reported that they used to fetch water from other natural sources like springs.

**For washing clothes**

61.32% households have reported that for washing clothes





they used the water from the community well, 13.28% households have reported that they used the water of their own well, 4.29% households have reported that they used the water from the pond, 1.95% households have reported that they used the water from river and 28.12% households have reported that they used the water from other natural sources.

**For animals**

39.06% households have reported that for animals they used the water from the community well, 9.37% households have reported that they used the water of their own well, 13.28% households have reported that they used the water from the pond, 6.25% households have reported that they used the water from river and 23.82% households have reported that they used the water from other sources for this purpose. (Refer Table No. 3.39 also).

**TABLE NO. 3.39**

**DISTRIBUTION OF HOUSEHOLDS ACCORDING TO SOURCES OF WATER SUPPLY BEFORE RURAL WATER SUPPLY PROGRAMME**

PURPOSE	SOURCE					
	COMMUNITY WELL	OWN WELL	POND	LAKE	RIVER	OTHERS
FOR COOKING	156	35	1	-	4	73
FOR WASHING CLOTHES	157	34	11	-	5	72
FOR ANIMALS	100	24	34	-	16	61

**Fetching water for household purpose**

Out of the total 256 households surveyed, 0.37% households have reported that only female fetch water, 1.95% households have reported that only male fetch water & 97.65% households have reported that both male and female fetch water for household purpose. (Refer Table No. 3.40 also).

**TABLE NO. 3.40**

**DISTRIBUTION OF HOUSEHOLDS ACCORDING TO THE PERSONS FETCHING WATER**

ONLY FEMALE	ONLY MALE	MALE & FEMALE
1	5	250



Time taken and distance covered in fetching water

96.87% households have reported that they took 30 minutes to bring water, 2.34% households have reported that they take 31-45 minutes to bring water, 0.78% households have reported that they take 46-60 minutes of water.

52.73% households have reported that they bring water from a distance of 50 mts, 27.34% households have reported that they bring water from a distance of 51-100 mts, 12.5% households have reported that they bring water from a distance of 101-200 mts, 5.07% households have reported that they bring water from a distance of 201-500 mts, 1.56% households have reported that they bring water from a distance of 501-1000 & .78% households have reported that they bring water from a distance of more than 1000 mts. (Refer Table No. 3.41 also).

TABLE NO. 3.41

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO DISTANCE COVERED AND TIME TAKEN TO BRING WATER

TIME IN MINUTES	DISTANCE OF METRES					
	UPTO 50	51-100	101-200	201-500	501-1000	>1000
UPTO 30	136	70	29	9	3	2
31-45	-	-	3	2	1	-
46-60	-	-	-	2	-	-

Problems in getting water before rural water supply programme

The surveyed households were asked about the main problems they faced in getting water before rural water supply programme. 44.53% households have reported that they used to get dirty / unhygienic water, 42.96% households have reported that sources of water used to get dried up at times, 39.45% households have reported that adequate quantity was not available, 18.33% households have reported that the water source was at a very long distance, 1.56% households have reported that there was irregular supply/availability of water and 6.25% households have reported some other problems also. (Refer Table No. 3.42 also).



TABLE NO. 3.42

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO PROBLEMS  
IN GETTING WATER BEFORE ARWSP

<u>PROBLEMS FACED FOR GETTING</u> <u>WATER BEFORE ARWSP</u>	<u>NO. OF HOUSEHOLDS</u>
Water available was unhygeinic	114
Sources of water used to get dried up at times	110
Adequate quantity of water not available	101
Distance to the source of water was long	47
Irregular supply/availability	4
Any other	16

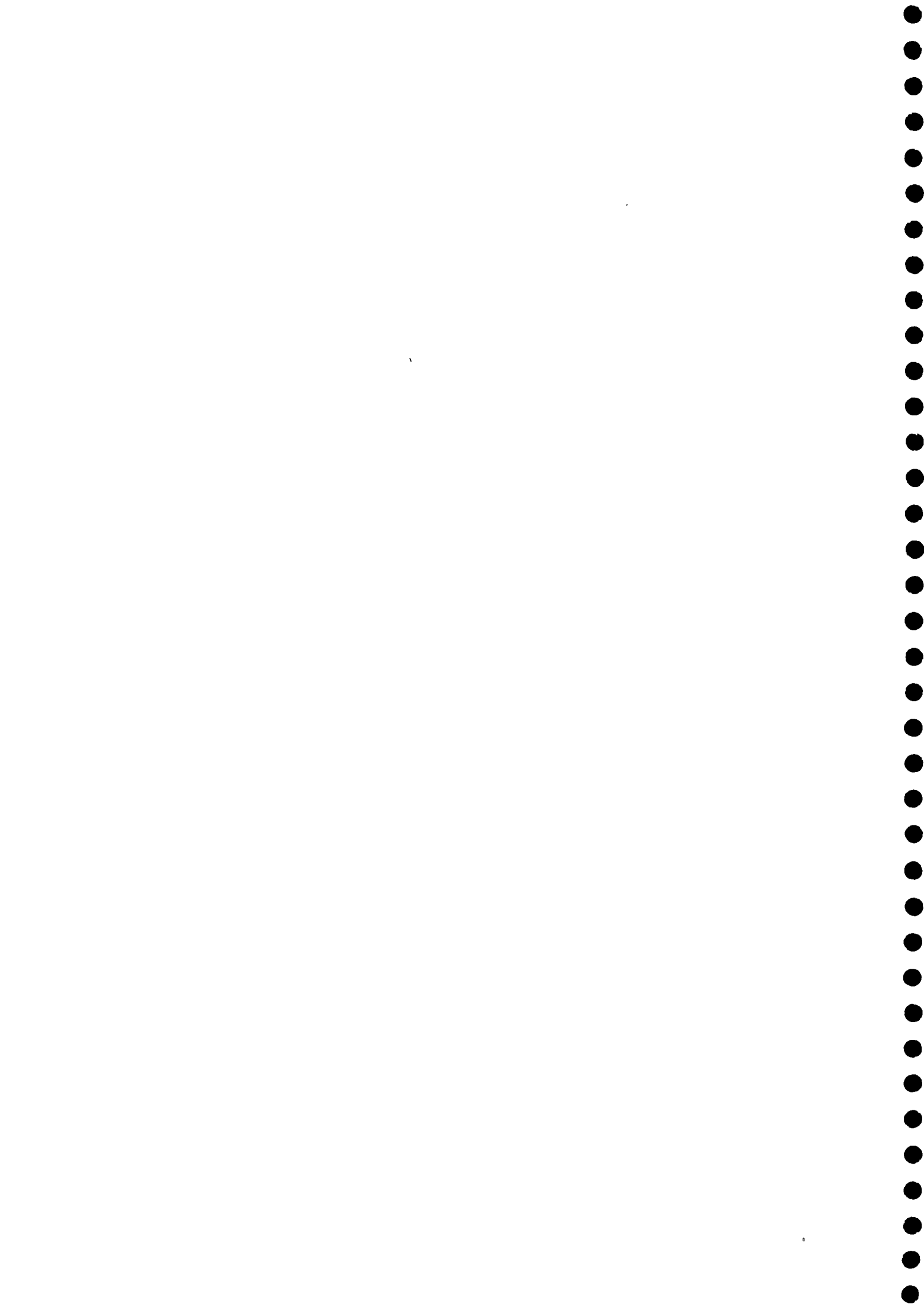
Current Water sources after rural water supply programme

Out of the government water supply sources it is reported that 83.2% households use water from hand pumps. Out of the non-government water supply sources, it is reported that 18.35% households use water from community wells, 10.93% households use water from their own well, 2.34% households use water from ponds and 44.14% households use water from other private sources like self pumps.

Distance of water source

32.03% households have reported that the hand pumps are at a distance of 0-50 mts, 32.03% households have reported that it is at a distance of 51-100 mts from their residence, 8.59% households have reported that it is at a distance of 101-150 mts, 3.9% households have reported that it is at a distance of 151-200 mts, 3.9% households have reported that it is at a distance of 201-500 mts & 1.56% households have reported that it is at a distance of 501-1000 mts.

5.85% households have reported that the community well is at a distance of 0-50 mts, 4.68% households have reported that it is at a distance of 51-100 mts from their residence, 2.34% households have reported that it is at a distance of 101-150 mts, 1.95% households have reported that it is at a distance of 151-200 mts, 1.17% households have reported that it is at a distance of 201-500 mts & 0.37% households have reported that it is at a distance of 501-1000 mts.



0.37% households have reported that it is at a distance of 101-150 mts from their residence, 0.78% households have reported that it is at a distance of 151-200 mts, 1.5% households have reported that it is at a distance of 201-500 mts, 0.37% households have reported that it is at a distance of 501-1000 mts.

1.17% households have reported that the river is at a distance of 0-50 mts, 0.37% households have reported that it is at a distance of 51-100 mts from their residence, 0.37% households have reported that it is at a distance of 151-200 mts, 0.78% households have reported that it is at a distance of 201-500 mts. (Refer Table No.3.43 also).

TABLE NO. 3.43

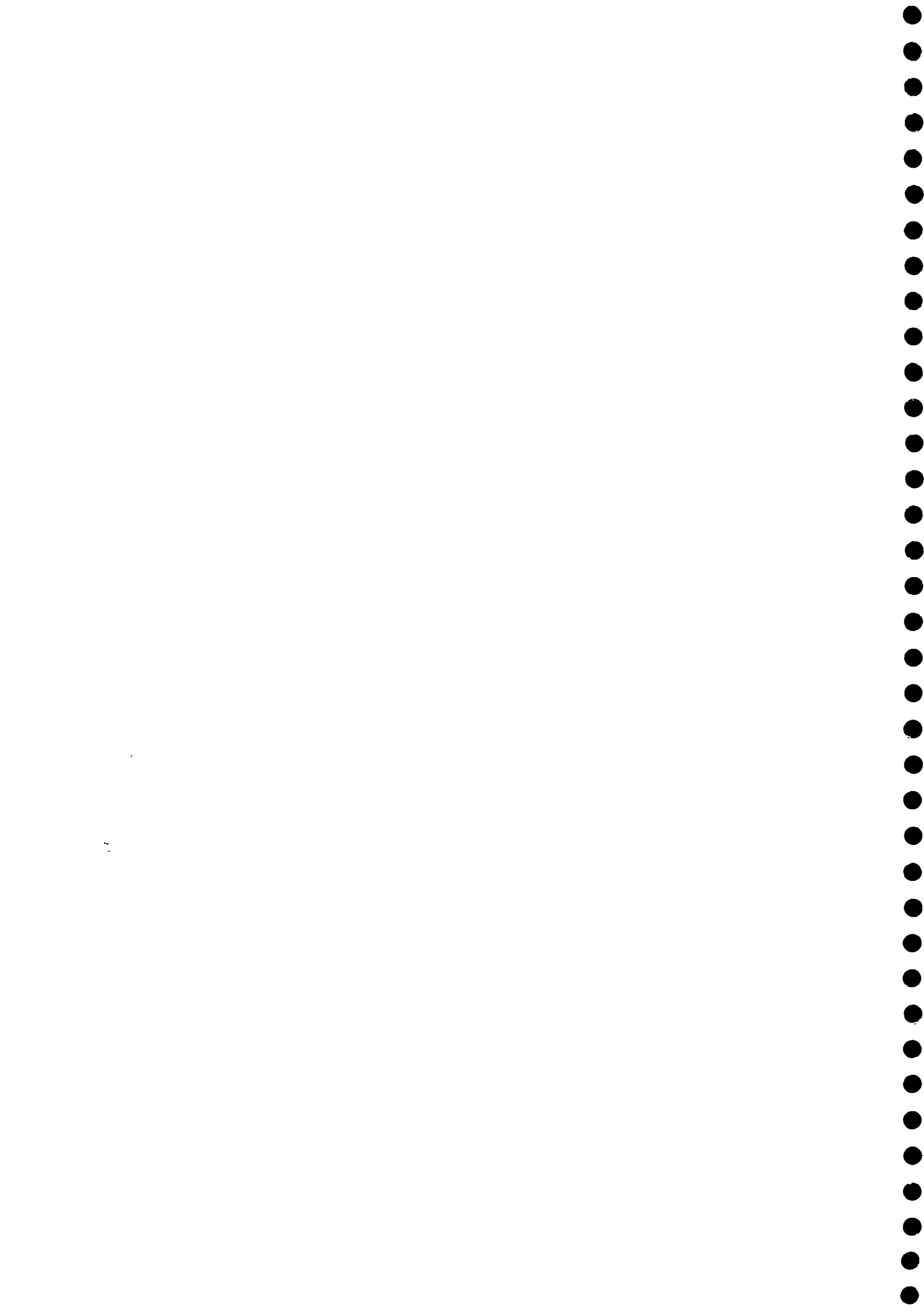
DISTRIBUTION OF HOUSEHOLDS ACCORDING TO CURRENT SOURCE OF WATER SUPPLY AND QUALITY OF WATER

SOURCE	QUALITY		DISTANCE IN METRES					
	DRINKABLE	NON-DRINKABLE	0-50	51-100	101-150	151-200	201-500	501-1000
Hand pump	213	1	82	82	22	10	10	4
Community well	47	28	15	12	6	5	3	1
Own well	28	14	13	4	1	1	1	-
Pond	6	13	-	-	1	2	4	1
River	-	7	3	1	-	1	2	-
Others	113	-	100	19	6	1	-	-

Problems after rural water supply programme

Though there are water sources like community well, self / own wells, pond and river, 0.37% households have reported that the tube wells are not in working condition or the water from the tube wells is not good for drinking, 10.93% households have that the water from the community wells is not good for drinking, 5.46% households have reported that the self / own wells are also not in good condition, 5.07% households have reported that water from the pond is not good for drinking and 2.73% households have reported that the river water is also not good for drinking.

40.63% households have reported that there is no problem for them in getting water while, 59.37% households have reported some problems even after the implementation of rural water supply programme. Out of these 59.37% households, 53.94% households have reported that they will not get adequate quantity of water, 60.52% households have reported that sources of water used to get dried





up at times, 28.28% have reported that the water sources is at a very long distance, 15.78% households have reported that they get dirty/unhygeinic water, 3.28% households have reported that people belonging all the castes were no allowed to take water from the water source & 2.63% households have reported that there is irregular supply of water daily. (Refer Table No. 3.44 also).

TABLE NO. 3.44

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO THE PROBLEMS REPORTED

<u>PROBLEMS</u>	<u>NO. OF HOUSEHOLDS</u>
Sources of water used to get dried up at times	92
Adequate quantity of water not available	82
Distance of source of water was long	43
Unhygeinic water was available	24
All caste were not allow to take water from the water source everytime	5
Irregular supply daily	4

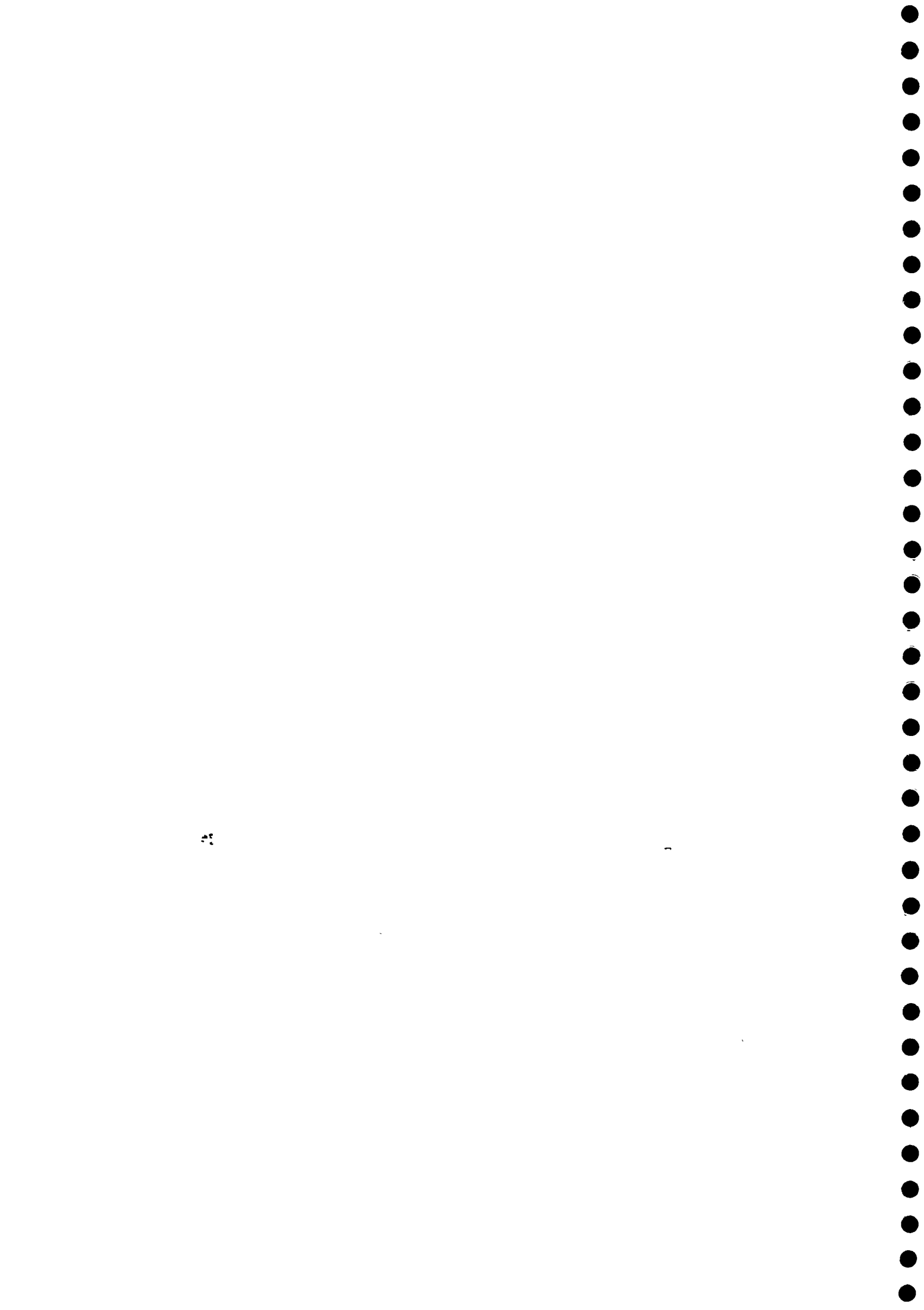
Duration of scarcity period of water supply after rural water supplu programme

Out of the total 256 households surveyed, 41% households have reported that there will be scarcity of water for 1-2 months, 28.12% households have reported that there will be scarcity of water for 3-4 months, 01.17% households have reported that there will be scarcity of water for 5-6 months, 0.78% households have reported that there will be scarcity of water for 9-10 months. (Refer Table No. 3.45 also).

TABLE NO. 3.45

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO DETAILS OF WATER SOURCES AND PROBLEMS AFTER ARWSP

<u>PERIOD (IN MONTHS)</u>	<u>NO. OF HOUSEHOLDS</u>
1-2	105
3-4	72
5-6	3
11-12	2



The quantity of Water available during scarcity & non-scarcity period

**For cooking and drinking**

During scarcity period the daily per capita availability of water for 2.9% households is upto 10 litres, for 39.21% households is 10-20 litres, for 20.39% households is 20-30 litres and for 11.36% households is 30-60 litres.

During non-scarcity period the daily per capita availability of water for 23.43% households is upto 10 litres, for 3.9% households is 10-20 litres, for 19.14% households is 20-30 litres, for 7.42% households is 30-40 litres and for 9.76% households is 40.70 litres.

**For washing clothes**

During scarcity period the daily per capita availability of water for washing purpose of 11.71% households is upto 10 litres, of 25.39% households is 10-20 litres, of 39.45% households is 20-30 litres, of 12.1% households is 30-40 litres and of 10.54% households is 40-90 litres.

During non-scarcity period the daily per capita availability of water for washing purpose of 23.43% households is upto 10 litres, of 39.76% households is 10-20 litres, of 19.14% households is 20-30 litres, of 7.42% households is 30-40 litres and of 9.76% households is 40-70 litres.

Availability of water for animals

During scarcity period according to 24% households for animals they get 100 litres of water, according to 13% households they get 101-150 litres of water, according to 14% households they get 151-200 litres of water, according to 5.5% they get 201-250 litres of water, according to 5% households they get 251-300 litres of water, according to 1.95% households they get 301-350 litres of water, according to 3.12% households they get 351-400 litres of water, according to 3.12% households they get 401-450.

During non-scarcity period according to 16% households for animals they get 100 litres of water, according to 12% households they get 101-150 litres of water, according to 18.18% households they get 151-200 litres of water, according to 9% they get 201-250 litres of water, according to 6.64% households they get 251-300 litres of water, according to 2.34% households they get 301-350 litres of water, according to 3.12% households they get 351-400 litres of water, according to 2.73% households they get 401-450 & according to 3.9% households they get 451-500 litres of water. (Refer Table No. 3.46 also).

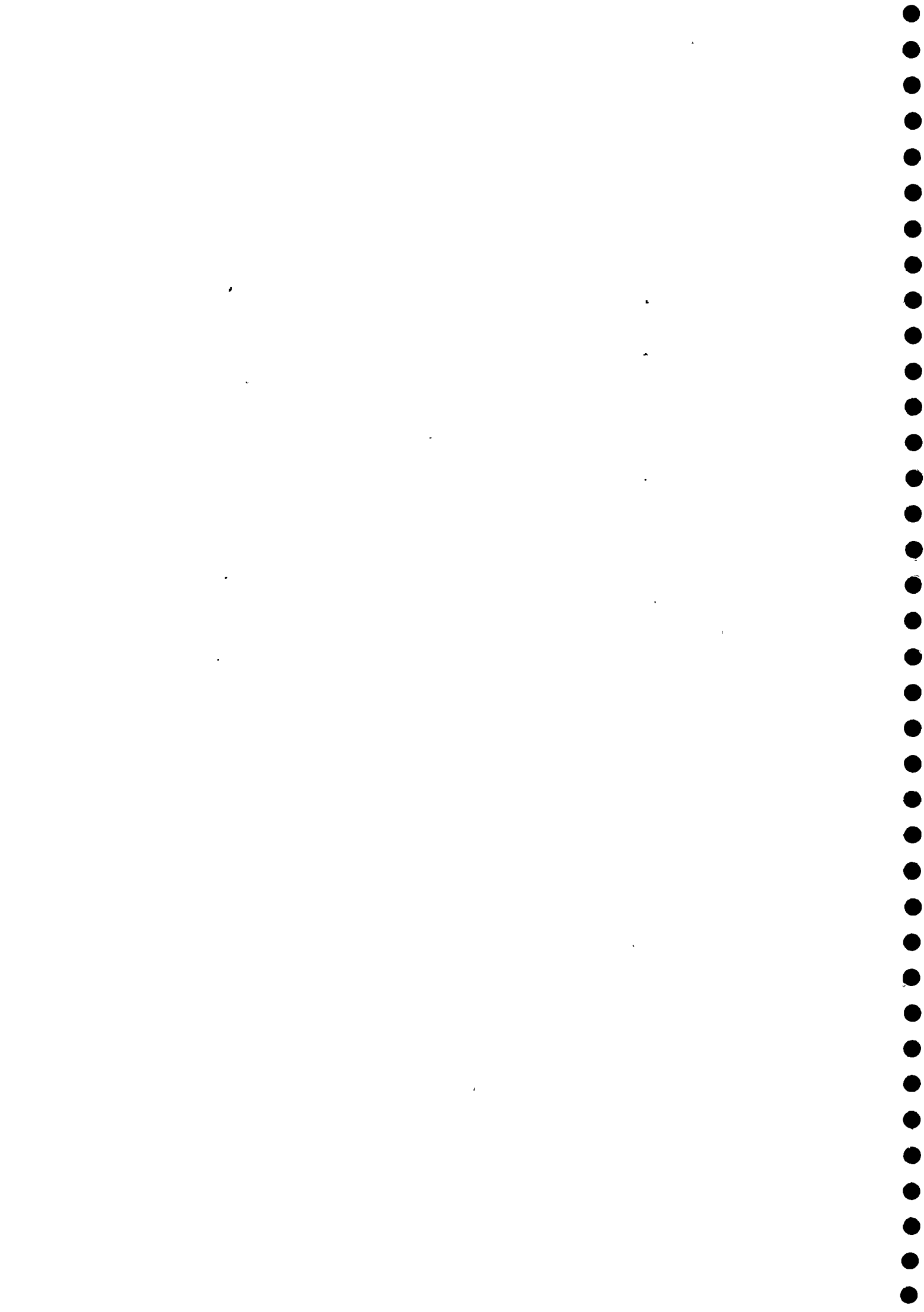


TABLE NO. 3.46

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO CURRENT AVAILABILITY  
OF WATER SUPPLY DURING SCARCITY AND NON-SCARCITY PERIOD

PURPOSE	>100	101-150	151-200	201-350	251-300	301-350	351-400	401-450	451-500
<u>During Scarcity</u>									
For Cooking	137	60	25	15	3	2	7	5	
For Washing	68	50	47	34	25	8	10	8	1
For Animals	61	33	17	14	13	5	8	8	-
Total	5	20	15	21	42	24	21	24	80
<u>During Non-Scarcity</u>									
For Cooking	117	65	28	15	6	2	9	1	10
For Washing	27	59	62	34	28	7	16	8	9
For Animals	40	30	46	22	17	5	8	7	10
Total	4	10	8	17	26	22	20	24	121

Operation and Maintenance of Water Source

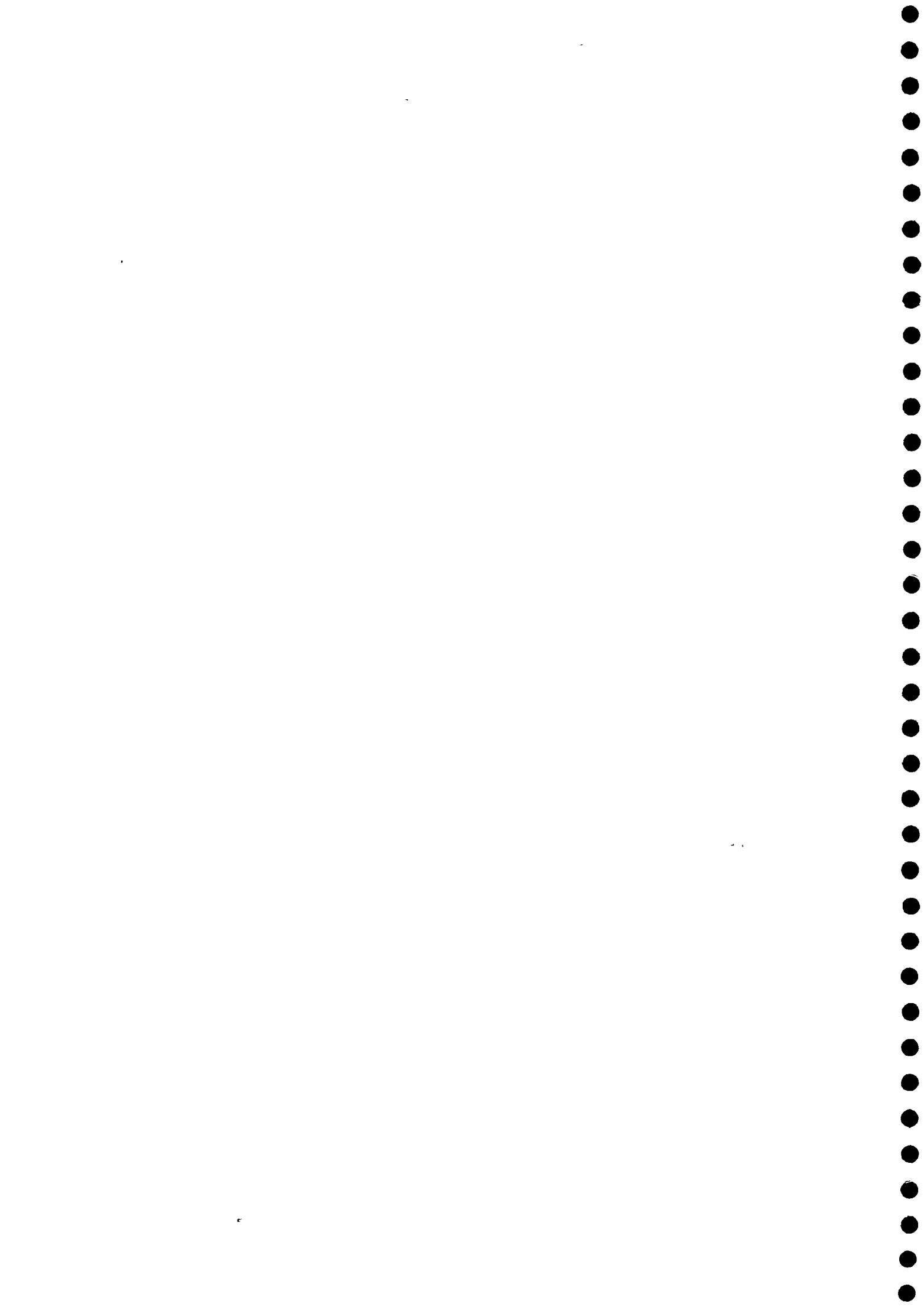
Persons responsible for the operation and maintenance

It is reported that for the operation and maintenance of water source community is responsible according to 48.43% households, individuals are responsible according to 39.06% households, PHED is responsible according to 2.34% households and village panchayat is responsible according to 0.78% households. (Refer Table No. 3.47 also).

TABLE NO. 3.47

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO  
THE PERSONS RESPONSIBLE FOR O & M

REASONS	NO. OF HOUSEHOLDS
Community	124
Individuals	100
PHED	6
Village Panchayat	2



Cost of operation and maintenance of water source

The cost of operation and maintenance of water source it is met by the community according to 48.04% households, is met by individual persons according to 41.79% households, it is met by PHED according to 1.56% households and it is met by the village panchayat according to 0.78% households, (Refer Table No. 3.48 also).

TABLE NO. 3.48

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO THEIR OPINION ABOUT WHOM SHOULD MEET THE COST OF O & M

<u>REASONS</u>	<u>NO. OF HOUSEHOLDS</u>
Community	123
Individuals	107
PHED	4
Village Panchayat	2

Opinion about the present system of operation and maintenance of water source

61.71% households were satisfied with the present system of operation and maintenance while 38.28% households were not satisfied with the present water supply system.

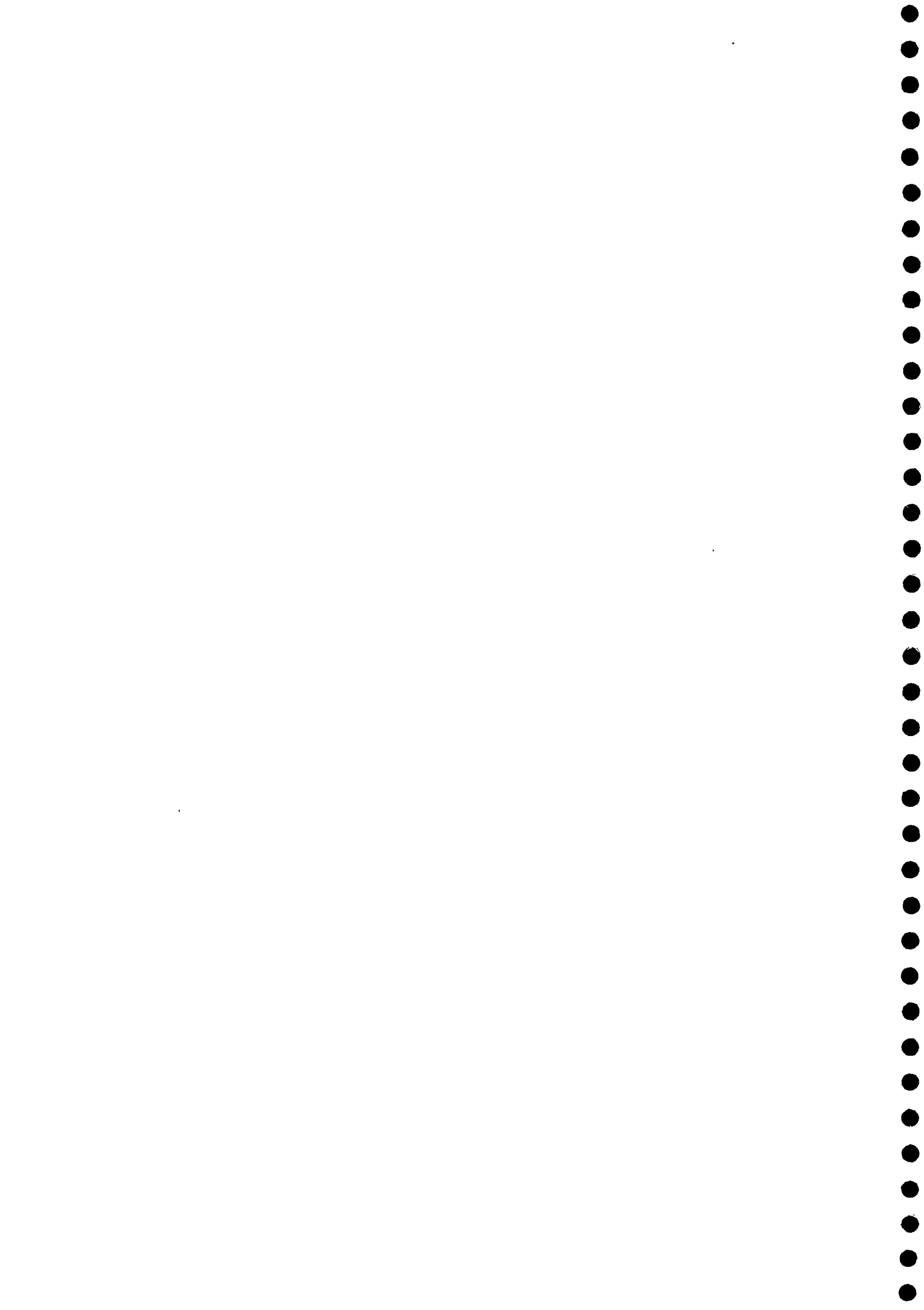
Out of 38.28% households who were not satisfied, 24.48% households have reported that trained manpower was not adequate in number, 57.14% households have reported that adequate funds were not available, 6.12% households have reported that people did not pay their share, 16.32% households have reported that the responsibility of O & M was not fixed and 8.16% households have reported some other reasons like carelessness of the government in the maintenance of water source, etc.

Functional status of source of water supply

According to 71.09% households hand pumps are functioning properly, according to 16.4% households the hand pumps are not functioning properly and according to 9.37% households the hand pumps are not at all functioning.

Frequent non-functioning of source of water

1.95% households were of the opinion that the hand pumps stops functioning once in a week, 1.56% households were of the opinion that the hand pumps stops functioning once in a fortnight, 13.28% households were of the opinion that it stops functioning once in a month. 12.1% households were of the opinion that it stops





functioning once in 2 months, 20.7% households were of the opinion that it stops functioning once in 3 months, 24.6% households were of the opinion that it stops functioning once in a year & 8.2% households were of the opinion that it stops functioning once in 2 years. (Refer Table No. 3.49 also).

TABLE NO. 3.49

FREQUENCY OF THE SOURCE GOING OUT OF ORDER

<u>FREQUENCY</u>	<u>NO. OF HOUSEHOLDS</u>
Once in a week	5
Once in a fortnight	4
Once a month	34
Once in 2 months	31
Once in a quarter	53
Once in a year	63
Once in 2 years	21

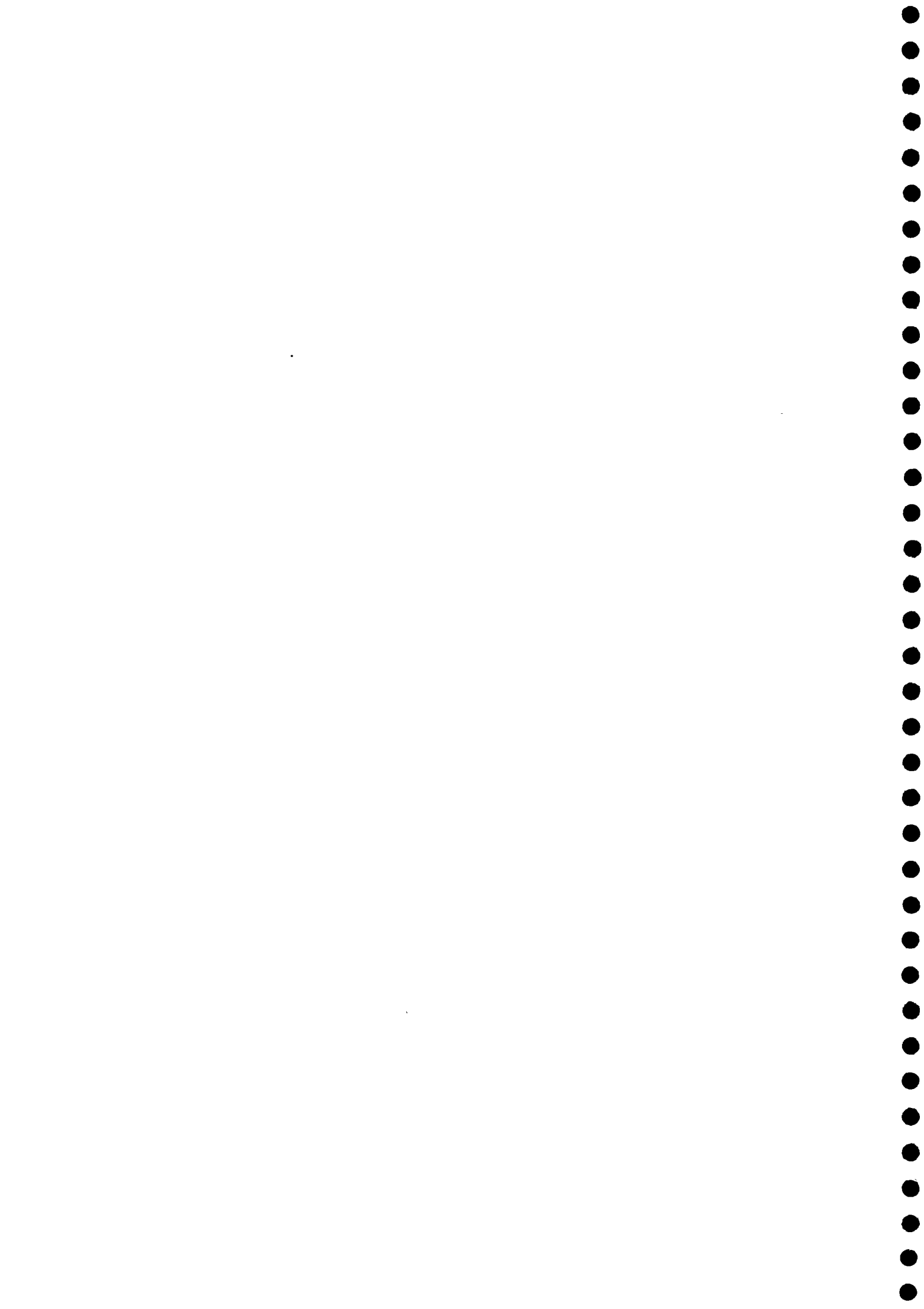
Reasons for non-functioning of the source of water

3.51% households were of the opinion that it is because of the installation of substandard equipments, according to 28.12% households it is because of improper use, according to 19.53% households it is because of damage by miscreants, according to 8.2% households it is because of natural calamities, according to 2.34% households it is because of faulty installation and according to 1.17% households it is because of theft of parts. (Refer Table No. 3.50 also).

TABLE NO. 3.50

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO REASONS REPORTED FOR THE WATER SOURCE GOING OUT OF ORDER

<u>REASONS</u>	<u>NO. OF HOUSEHOLDS</u>
Substandard equipment	72
Improper use	50
Damage due to natural calamities	21
Faulty installation	9
Damage by miscreants	6
Theft of parts	3



Cost for proper and regular water supply

Opinion of the villagers were elicited regarding whom should meet the cost of installation and maintenance for proper and regular water supply. According to 94.53% households government should meet the cost, according to 0.37% households panchayat should meet the cost, according to 0.37% households self/community should meet the cost and according to 0.37% PHED should meet the cost for proper and regular water supply.

According to 37.5% households government should meet the cost, according to 0.37% households panchayat should meet the cost, according to 0.78% households NGO should meet the cost, according to 21.48% households government and panchayat jointly should meet the cost, according to 33.2% households self/community should meet the cost and according to 1.95% PHED should meet the cost for proper and regular water supply. (Refer Table No. 3.51 also).

TABLE NO. 3.51

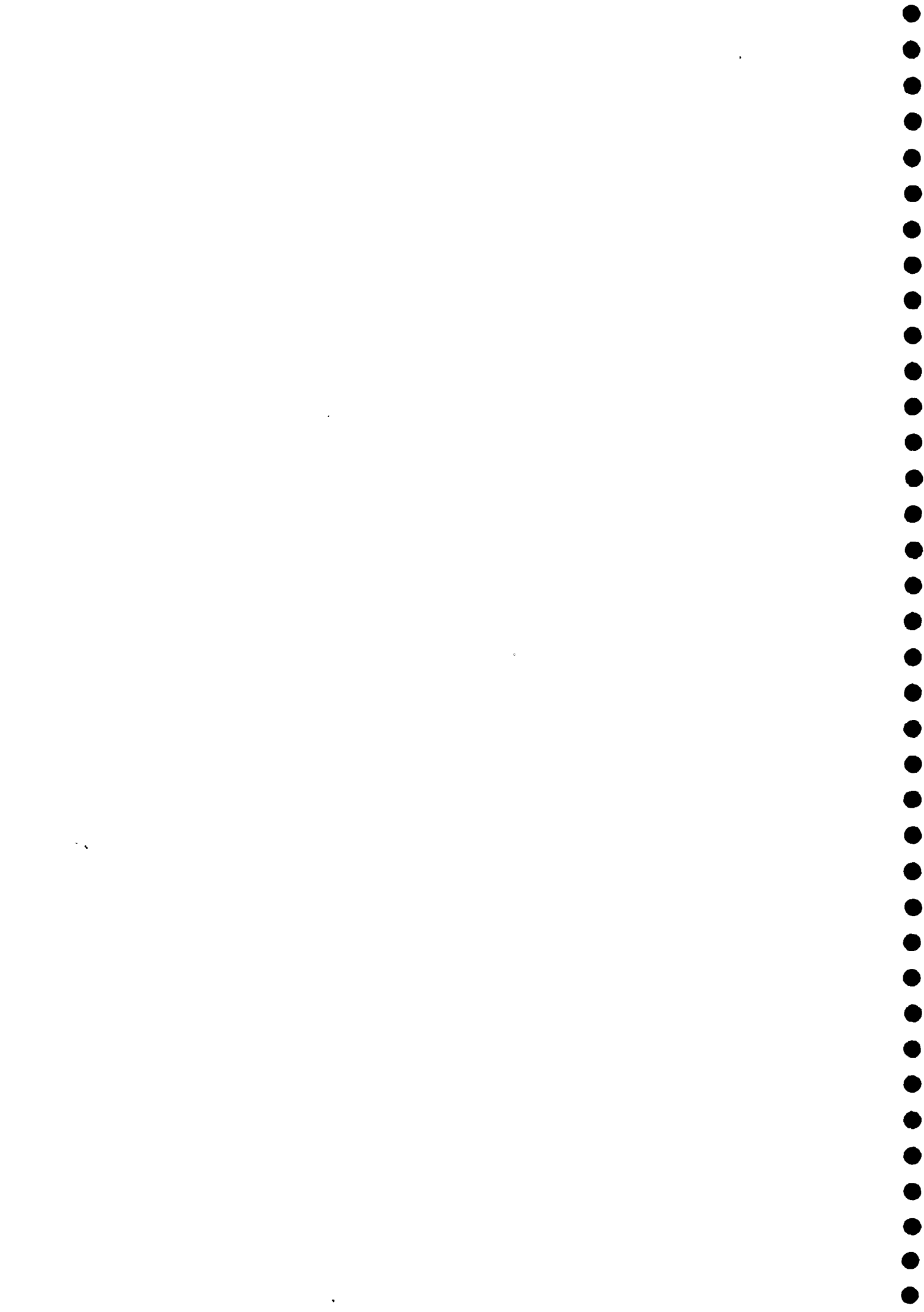
OPINION ABOUT THE PERSON WHOM SHOULD MEET THE COST OF WATER SUPPLY

	<u>INSTALLATION</u>	<u>MAINTENANCE</u>
Government	242	96
Panchayat	1	1
NGO	-	2
Government & Panchayat jointly	-	55
Self/Community	1	85
PHED	1	5

Extent and sharing pattern of the cost of installation / O & M

According to 65.23% households there should be equal share per household, according to 21.09% households it should be proportionate to number of family members and according to 1.56% households it should be proportionate to actual water consumption.

76.56% households were of the opinion that the amount should be less than Rs. 20/-, 8.98% were of the opinion that it should be in between Rs. 21-40/-, 0.78% were of the opinion that it should be in between Rs. 41-60/-, 0.37% were of the opinion that it should be in between Rs. 81-100/- and according to 1.17% households it should be less than Rs. 100/-.



Contribution for the installation of water source

It is reported that 24.06% households have contributed some amount and 75.39% households have not contributed any thing for the implementation of water source.

Out of the 24.06% households who have contributed some amount, it is reported that 1.58% households have contributed an amount below Rs. 100/-, 1.58% households have contributed Rs.101-300, 1.58% households have reported that they contributed Rs. 301-500, 52.38% households have reported that they contributed Rs. 501-1000/ & 42.85% households have reported that they contribute more than Rs. 1000/-.

Status of Hygienic Conditions around Water source

25.78% households have reported that hygienic condition is not maintained around the water source and 74.21% households have reported that hygienic condition is maintained around the water source.

Out of the 24.78% households who felt that hygienic condition is not maintained around the water source, 69.69% households felt that it is because there was no proper drainage system, 3.03% households felt that it is because the location was not proper, 40.9% households felt that it is because necessary repairs are not done, 12.12% households felt that it is because cleanliness is not maintained properly & 6.06% households felt that it is because of some other reasons.

Quality of the water supply

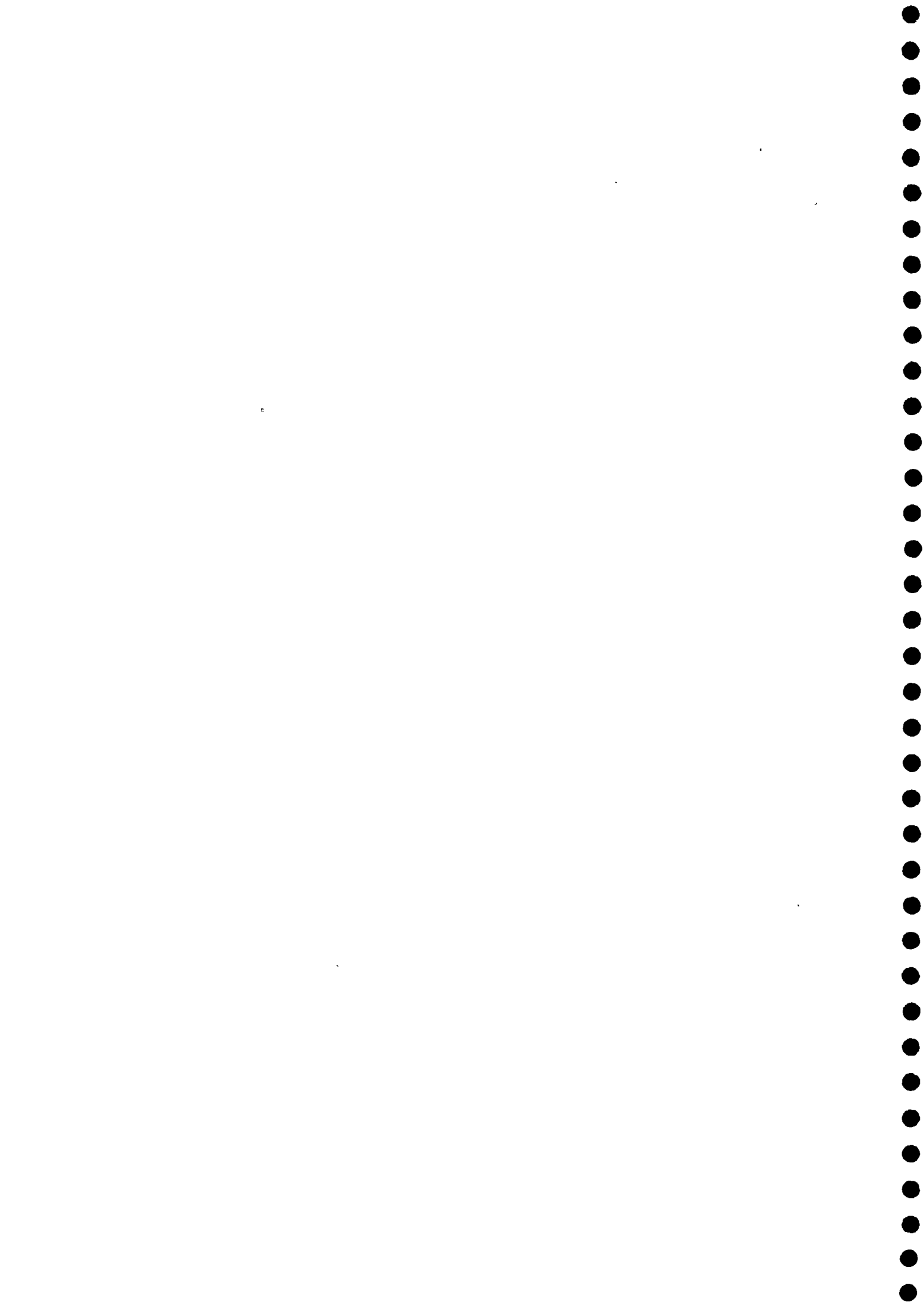
Villagers were asked about the quality of water available for cooking and drinking. But they were unable to express whether they are getting hygienic or unhygienic water. Because of the lack of awareness they were unable to differentiate the quality of water. They use all types of water for cooking and drinking without checking its quality. Thus 89.45% households were of the opinion that the water supplied is fit for drinking while 10.54% households were of the opinion that it is not fit for drinking.

All the households have reported that there is no facility for checking water in their village or near by their village.

Testing drinking water or pollution check

All households have reported that there is no regular checking of drinking water.

19.14% have reported that there is no regular checking of drinking water in their village, 87.10% households felt that there is no facility for checking drinking water, 5.07% felt that it is not sure that clean water is coming through water sources or not, 0.37% households felt that there is leakage in pipe lines.



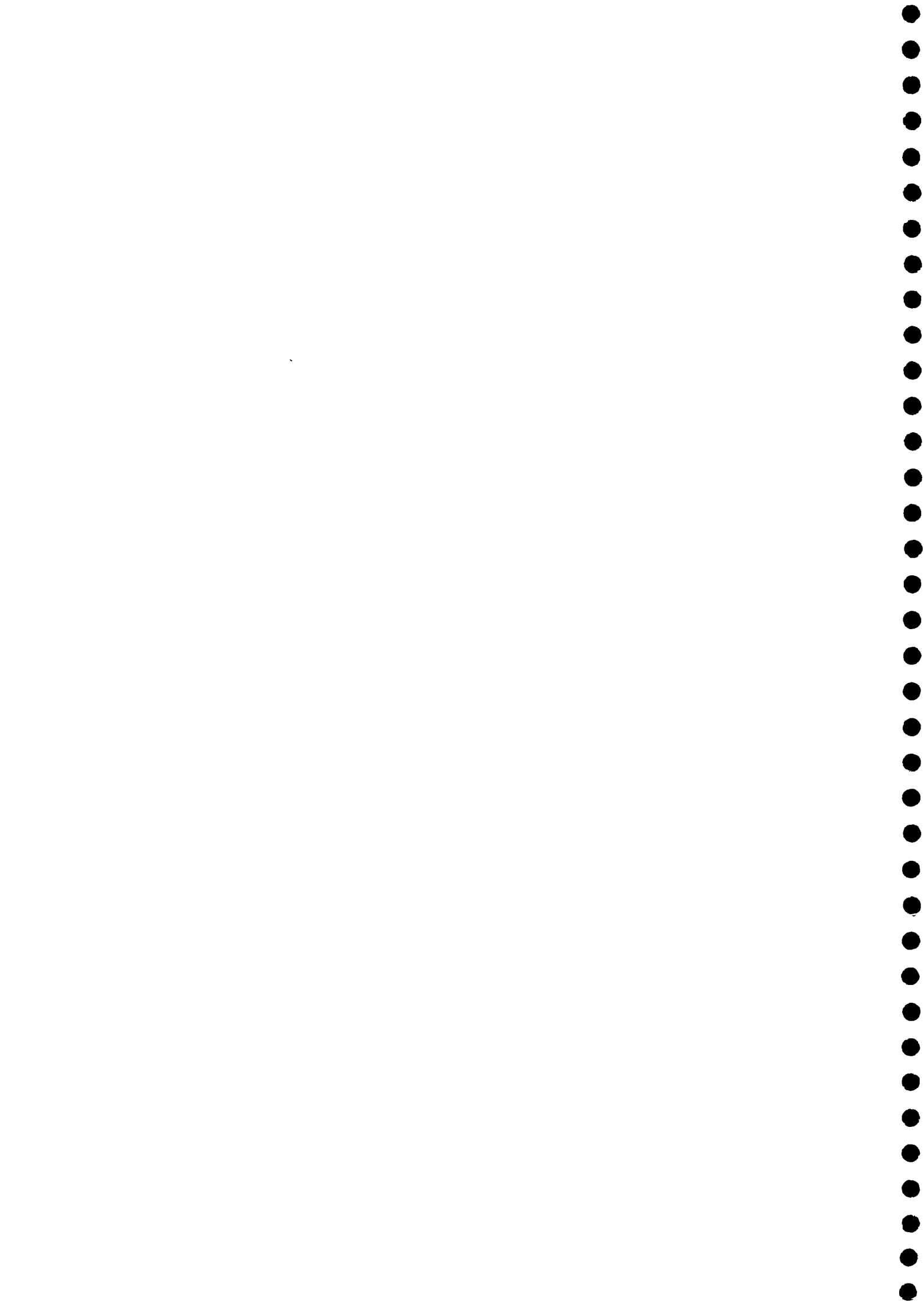
Water borne diseases after rural water supply programme

The occurrence of water borne diseases like diarrhoea decreased according to 39.45% households and not changed according to 6.25% households. The occurrence of cholera decreased according to 46.48% households and not changed according to 1.56% households. The occurrence of typhoid decreased according to 27.34% households, and not changed according to 1.17% households. The occurrence of malaria decreased according to 35.93% households, increased according to 3.9% households and not changed according to 12.5% households, skin diseases decreased according to 5.85% households and other diseases decreased according to 9.76% households. (Refer Table No. 3.52 also).

TABLE NO. 3.52

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO OCCURRENCE OF WATER BORNE DISEASES

DISEASES	DECREASED	NO CHANGE	INCREASED
Diarrhoea	101	16	5
Cholera	119	4	2
Typhoid	70	3	4
Malaria	92	32	10
Skin infection	14	-	5
Others	25	10	7





SURVEY FINDINGS - DUMKA

265 households were surveyed in Dumka district for data collection. The analysis of the data is given below based on different variables.

Per Capita requirement of water

**For cooking and drinking**

Out of the total 265 households surveyed it is reported that the per capita daily requirement for cooking and drinking of 25.66% households is upto 10 litres of water, of 41.5% households is 10-20 litres, of 10.94% households is 20-30 litres, of 20.75% is 30-40 litres, of 1.17% households is 40-50 litres of water daily.

**For washing**

Out of the total 265 households surveyed it is reported that the per capita requirement for washing purpose for washing purpose of 7.54% households is upto 10 litres of water, of 18.49% households is 10-20 litres, of 41.5% households is 20-30 litres, of 11.31% households is 30-50 litres, of 9.04% households is 50-70 litres, of 11.98% households is 70-150 litres of water.

**Total per capita requirement of water for cooking and washing**

The total per capita daily requirement of water for both cooking /drinking and washing clothes of 9.05% households is upto 10 litres of water, of 16.22% households is 20-30 litres, of 38.71% households is 30-40 litres, of 7.79% households is 40-70 litres, of 14.32% households is 70-100 litres and of 12.42% households is above 150 of litres of water.

Requirement of water for animals

3.39% households have reported that they require 50 litres of water daily, 23.77% households have reported that they require 50-100 litres of water daily, 13.2% households have reported that they require 100-150 litres of water daily, 6.79% households have reported that they require 151-200 litres of water daily, 6.02% households require 201-300 litres of water daily & 11.29% households require more than 300 litres of water. (Refer Table No. 3.53 also).

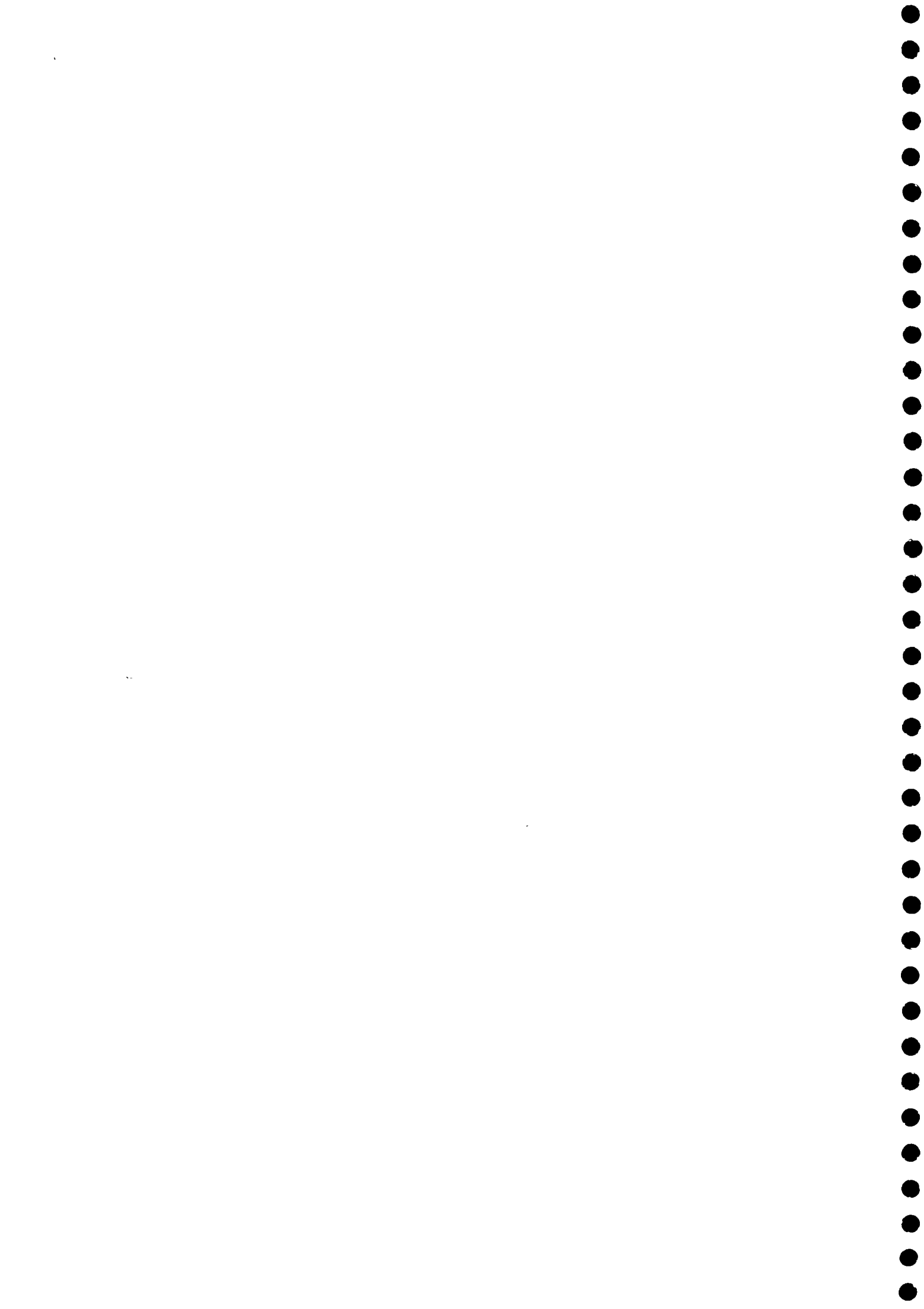


TABLE NO. 3.53

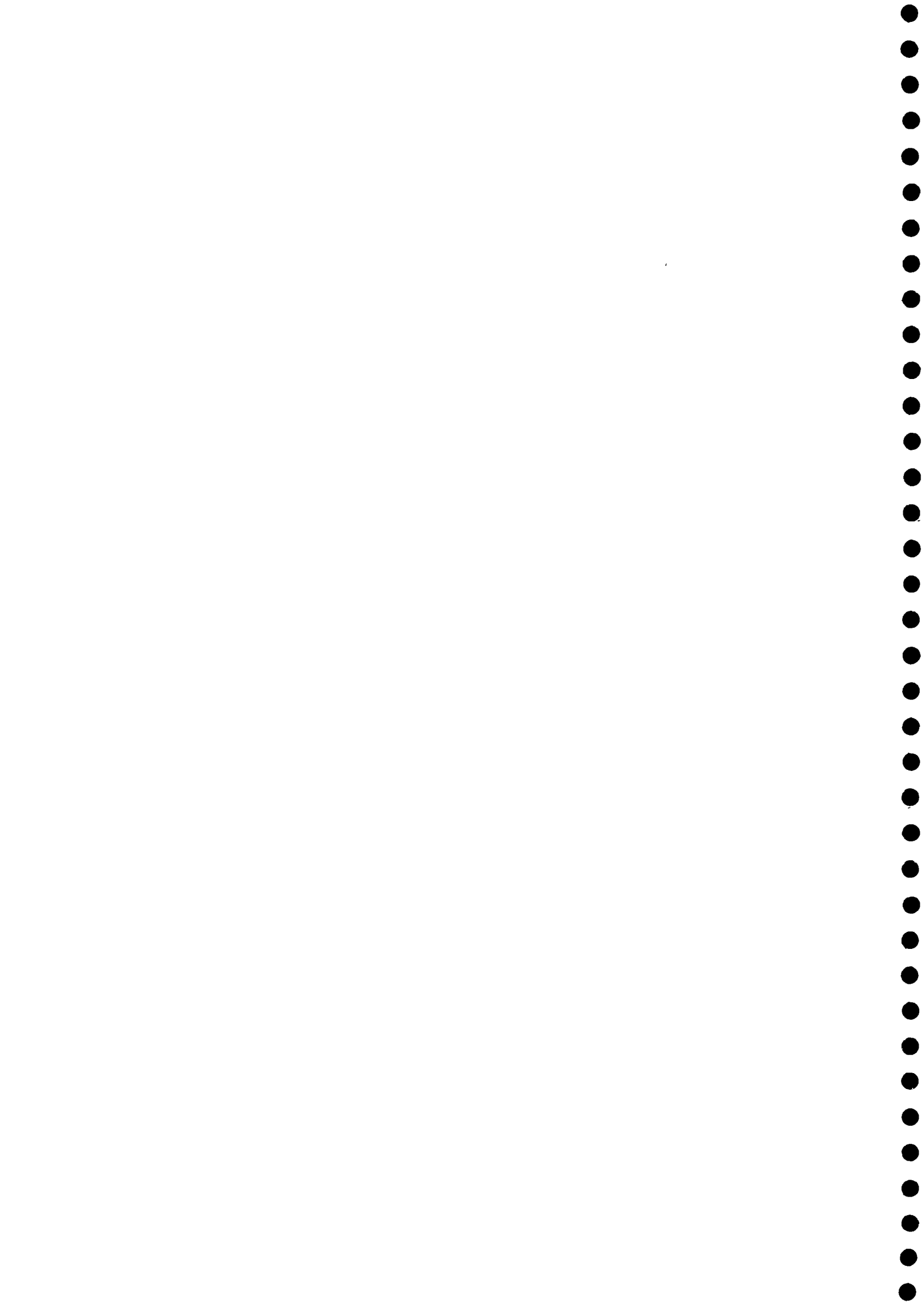
DISTRIBUTION OF HOUSEHOLDS ACCORDING TO  
PER CAPITA REQUIREMENT OF WATER

<u>PER CAPITA REQUIREMENT</u>	<u>COOKING &amp; DRINKING</u>	<u>FOR WASHING</u>	<u>TOTAL</u>
0-10	68	20	6
10-20	110	49	18
20-30	29	110	43
30-40	55	16	101
40-50	3	14	16
50-60	-	12	4
60-70	-	12	6
70-80	-	12	4
80-90	-	2	15
90-100	-	10	19
100-110	-	2	6
110-120	-	1	9
120-130	-	1	8
130-140	-	2	1
140-150	-	2	3
>150	-	-	6

Sources of water supply before rural water supply programme

Sources for cooking and drinking

Out of the total 265 households surveyed, 84.52% households have reported that they used to fetch water from the community well, 6.79% households have reported that they used to fetch water from their own well, 0.75% households have reported that they used to fetch water from pond, 0.75% households have reported that they used to fetch water from rivers and 10.56% households have reported that they used to fetch water from other natural sources like springs



**For washing**

83.39% households have reported that for washing clothes they used the water from the community well, 7.92% households have reported that they used the water of their own well, 40% households have reported that they used the water from the pond, 0.75% households have reported that they used the water from the lake, 4.52% households have reported that they used the water from river and 10.56% households have reported that they used the water from other natural sources.

**For animals**

39.24% households have reported that for animals they used the water from the community well, 7.16% households have reported that they used the water of their own well, 47.92% households have reported that they used the water from the pond, 0.75% households have reported that they used the water from the lake, 4.52% households have reported that they used the water from river and 12.45% households have reported that they used the water from other sources for this purpose. (Refer Table No. 3.54 also).

**TABLE NO. 3.54**

**DISTRIBUTION OF HOUSEHOLDS ACCORDING TO SOURCES OF WATER SUPPLY BEFORE RWSP**

PURPOSE	SOURCE					
	COMMUNITY WELL	OWN WELL	POND	LAKE	RIVER	OTHERS
FOR COOKING	224	18	2	-	2	28
FOR WASHING CLOTHES	221	21	106	2	12	28
FOR ANIMALS	104	19	127	2	12	33

**Fetching water for household purpose**

Out of the total 265 households surveyed, 0.37% households have reported that only female fetch water & 99.62% households have reported that both male and female fetch water for household purpose. (Refer Table No. 3.55 also)

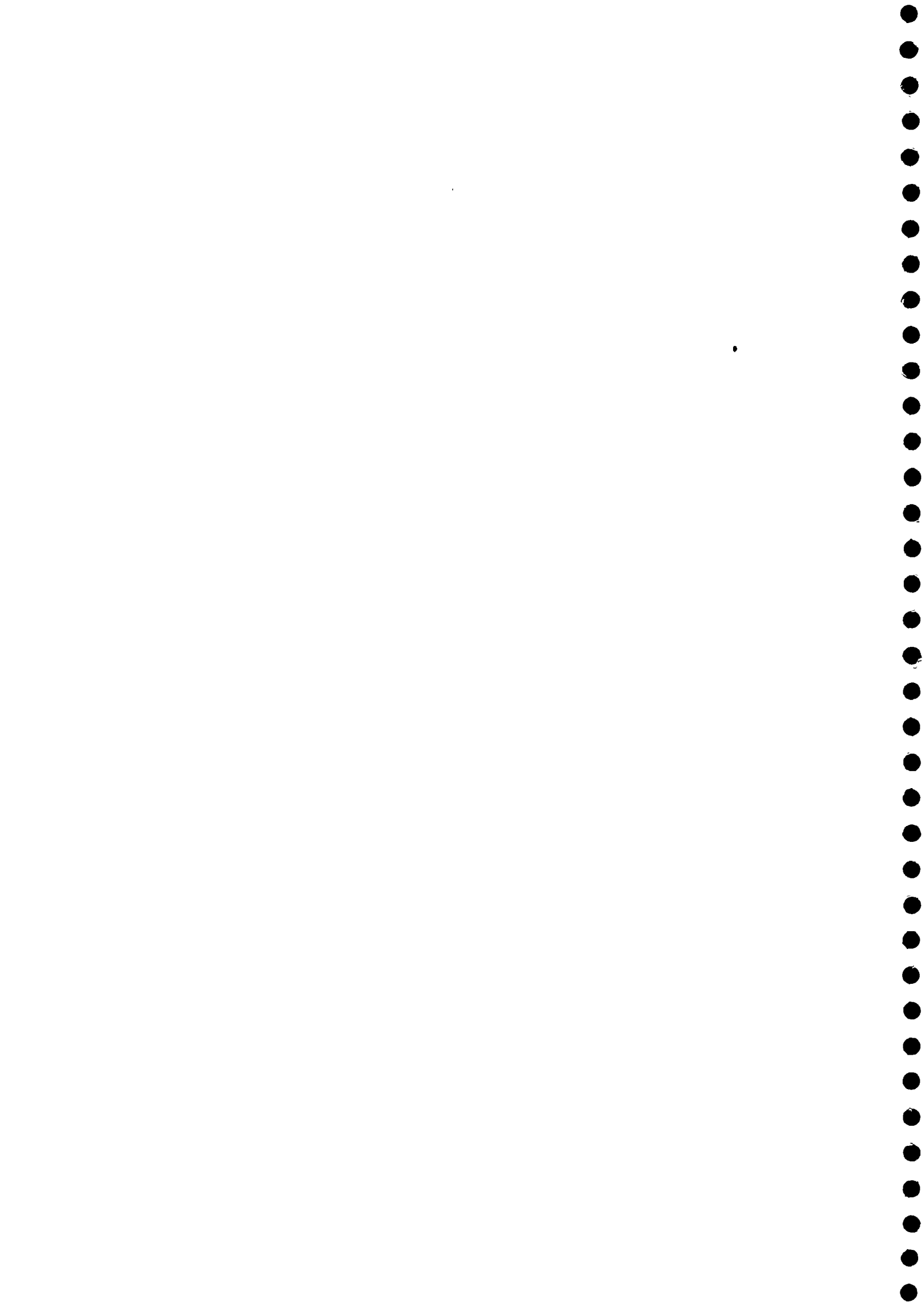


TABLE NO. 3.55

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO THE PERSONS FETCHING WATER

<u>ONLY FEMALE</u>	<u>ONLY MALE</u>	<u>MALE &amp; FEMALE</u>
1	-	264

Time taken and distance covered in fetching water

93.58% households have reported that they took 30 minutes to bring water, 3.39% households have reported that they take 31-45 minutes to bring water & 1.13% households have reported that they take 46-60 minutes of water.

13.96% households have reported that they bring water from a distance of 50 mts, 35.84% households have reported that they bring water from a distance of 51-100 mts, 22.64% households have reported that they bring water from a distance of 101-200 mts, 21.5% households have reported that they bring water from a distance of 201-500 mts, 3.01% households have reported that they bring water from a distance of 501-1000 & 3.01% households have reported that they bring water from a distance of more than 1000 mts. (Refer Table No. 3.56 also).

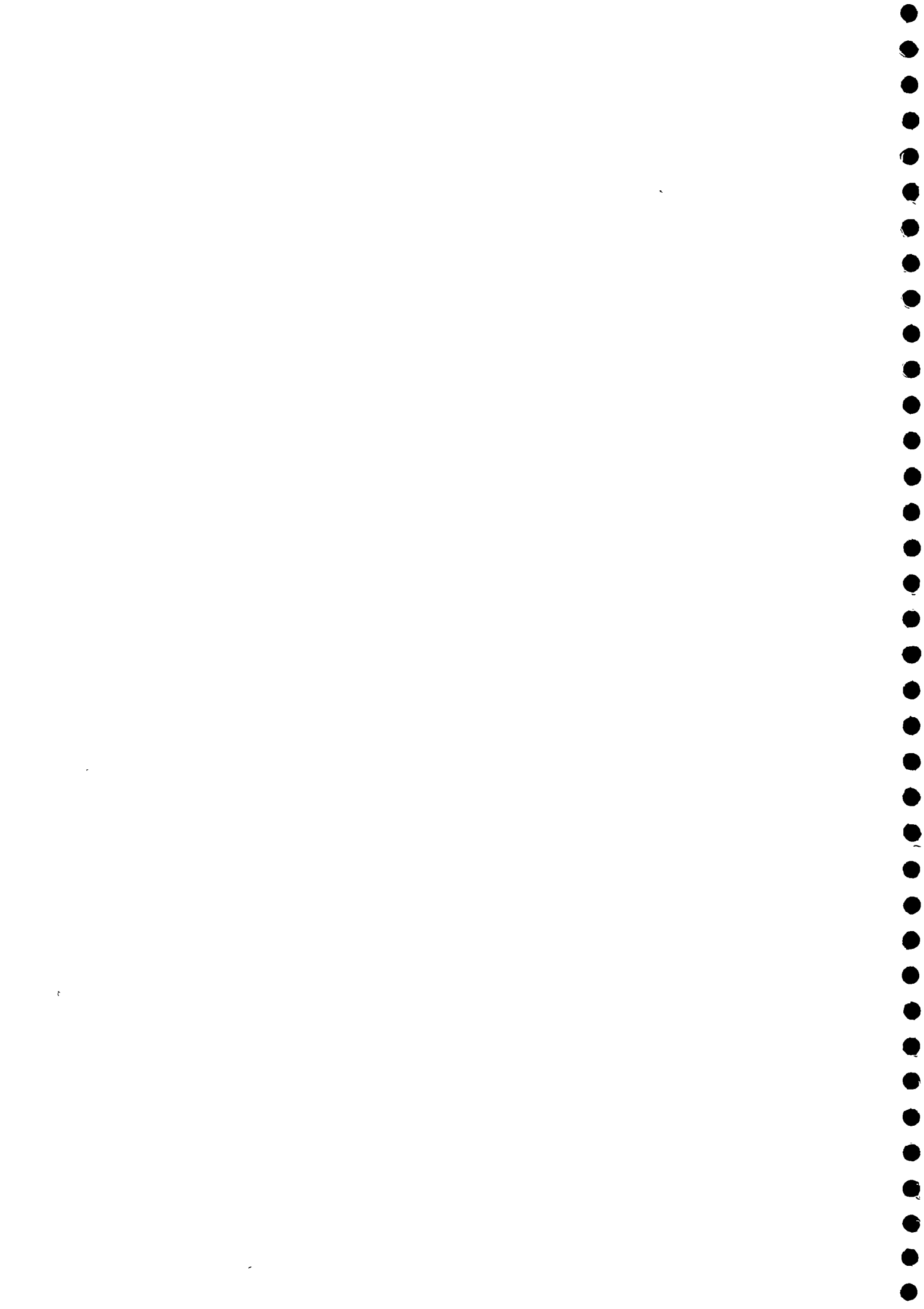
TABLE NO. 3.56

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO DISTANCE COVERED AND TIME TAKEN TO BRING WATER

<u>TIME IN MINUTES</u>	<u>DISTANCE IN METRES</u>					
	<u>UPTO 50</u>	<u>51-100</u>	<u>101-200</u>	<u>201-500</u>	<u>501-1000</u>	<u>&gt;1000</u>
<u>UPTO 30</u>	37	95	59	45	7	5
<u>31-45</u>	-	-	1	8	-	-
<u>46-60</u>	-	-	-	4	1	-
<u>61-90</u>	-	-	-	-	-	3

Problems in getting water before rural water supply programme

The surveyed households were asked about the main problems they faced in getting water before rural water supply programme. 60.75% households have reported that sources of water used to get dried up at times, 37.35% households have reported that they used to get dirty / unhygeinic water, 34.52% households have reported that there was irregular supply/availability of water, 30.18% households have reported that the water source was at a very long distance, 26.41% households have reported that adequate





quantity was not available and 2.64% households have reported some other problems also. (Refer Table No. 3.57 also).

TABLE NO. 3.57

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO PROBLEMS  
IN GETTING WATER BEFORE ARWSP

<u>PROBLEMS FACED FOR GETTING WATER BEFORE ARWSP</u>	<u>NO. OF HOUSEHOLDS</u>
Sources of water used to get dried up at times	161
Water available was unhygeinic	99
Distance to the source of water was long	80
Adequate quantity of water not available	70
Irregular supply/availability	12
Any other	7

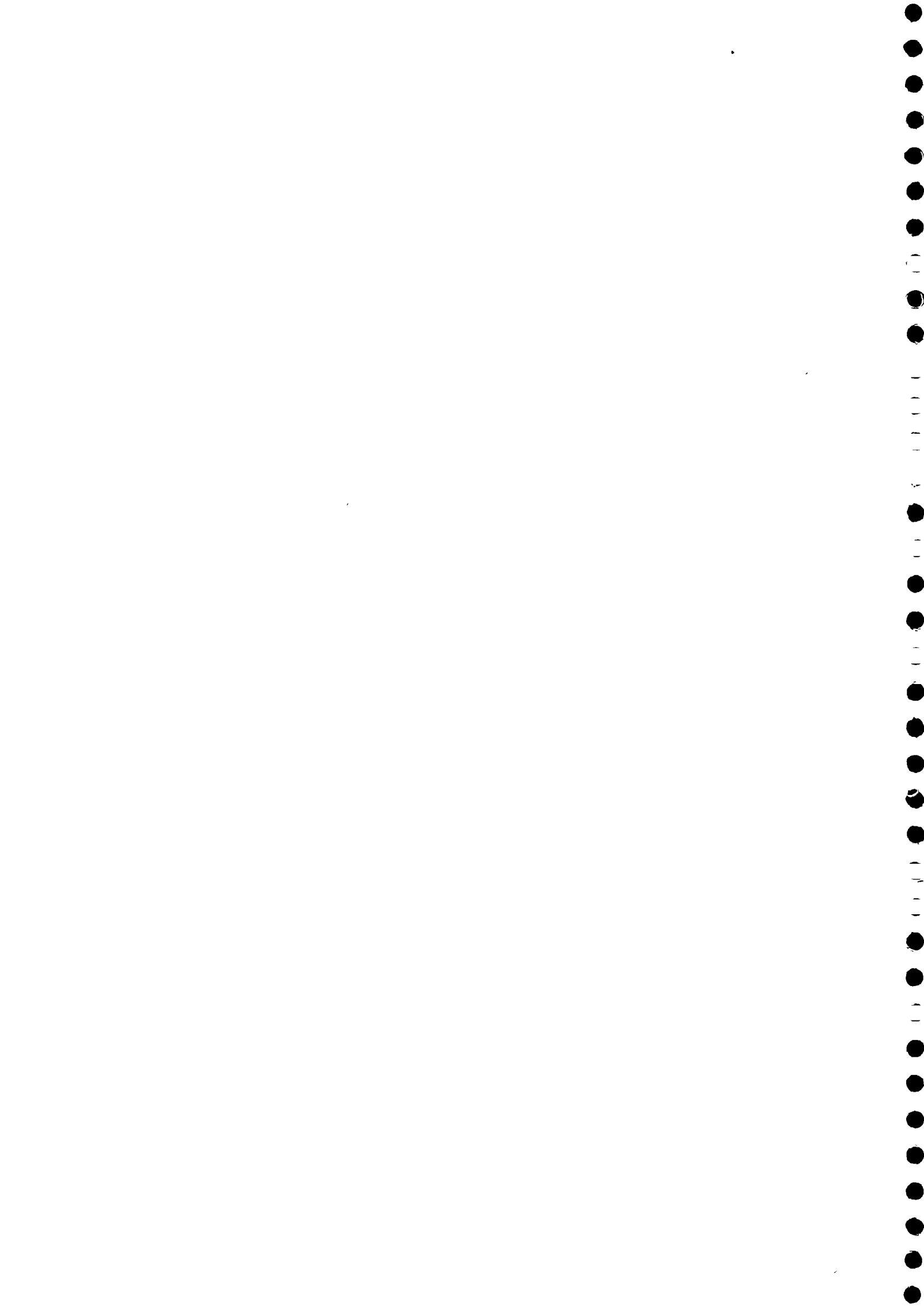
Current Water sources after rural water supply programme

Out of the government water supply sources it is reported that 71.69% households use water from hand pumps. Out of the non-government water supply sources, it is reported that 67.16% households use water from community wells, 17.73% households use water from their own well & 0.75% households use water from ponds.

Distance of water source

12.83% households have reported that the hand pumps are at a distance of 0-50 mts, 33.58% households have reported that it is at a distance of 51-100 mts from their residence, 19.24% households have reported that it is at a distance of 101-150 mts, 7.54% households have reported that it is at a distance of 151-200 mts, 5.28% households have reported that it is at a distance of 201-500 mts & 0.37% households have reported that it is at a distance of 501-1000 mts.

4.9% households have reported that the community well is at a distance of 0-50 mts, 21.13% households have reported that it is at a distance of 51-100 mts from their residence, 19.62% households have reported that it is at a distance of 101-150 mts, 13.2% households have reported that it is at a distance of 151-200 mts, 12.83% households have reported that it is at a distance of 201-500 mts & 2.64% households have reported that it is at a



distance of 501-1000 mts.

2.64% households have reported that the pond is at a distance of 51-100 mts, 1.56% households have reported that it is at a distance of 101-150 mts from their residence, 10.56% households have reported that it is at a distance of 151-200 mts, 19.24% households have reported that it is at a distance of 201-500 mts, 8.3% households have reported that it is at a distance of 501-1000 mts.

0.75% households have reported that it is at a distance of 201-500 mts & 0.37% households have reported that it is at a distance of 501-1000 mts. (Refer Table No. 3.58).

TABLE NO. 3.58

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO CURRENT SOURCE OF WATER SUPPLY AND QUALITY OF WATER

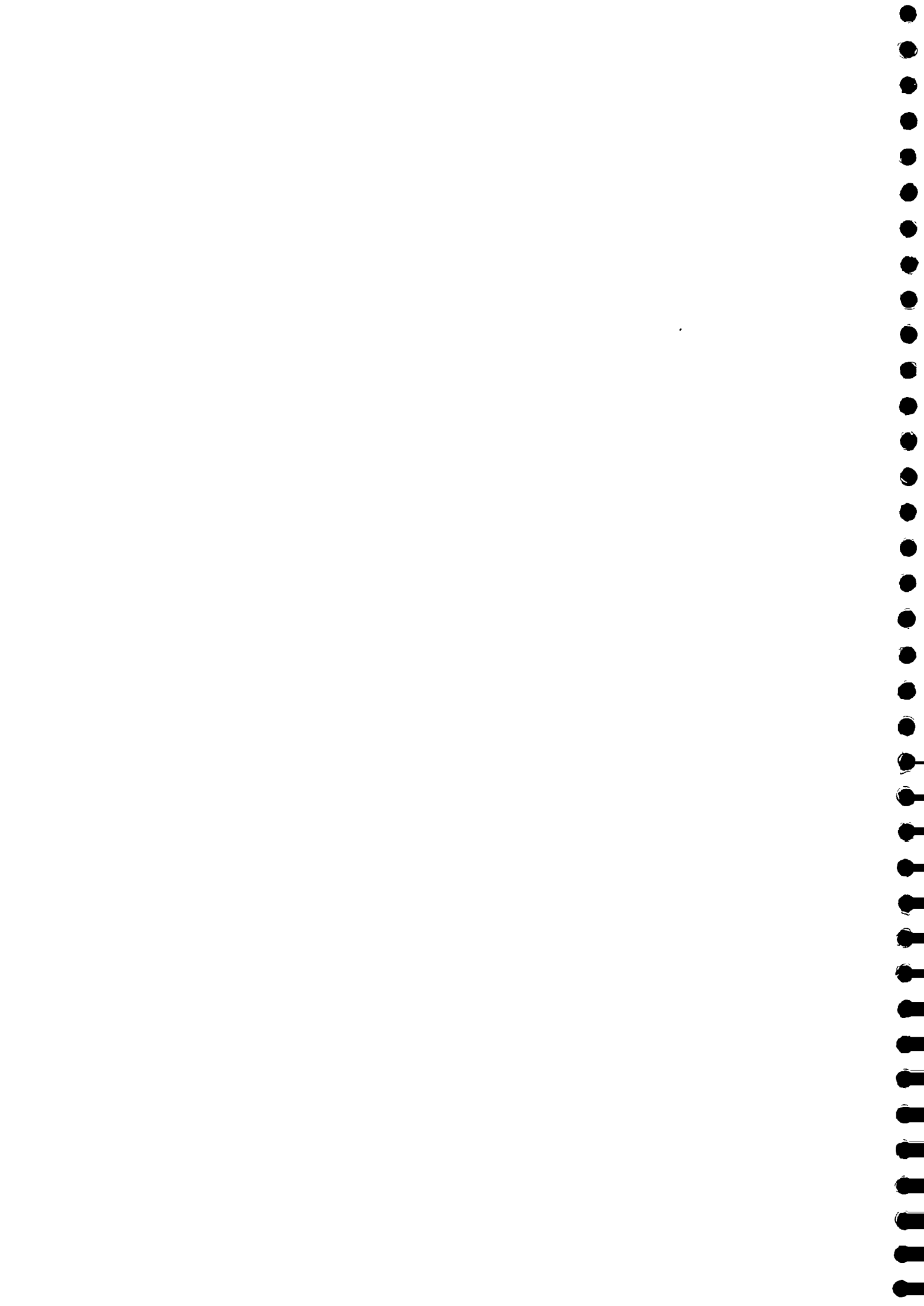
SOURCE	QUALITY		DISTANCE IN METRES					
	DRINKABLE	NON-DRINKABLE	0-50	51-100	101-150	151-200	201-500	501-1000
Hand pump	190	8	34	89	51	20	14	1
Community well	178	34	13	56	52	35	34	7
Own well	47	29	24	17	5	2	2	22
Pond	2	88	-	7	4	28	51	23
River	-	14	-	-	-	-	6	1
Others	-	2	-	-	-	-	2	-

Problems after rural water supply programme

Though there are water sources like community well, self / own wells, pond and river, 3.01% households have reported that the tube wells are not in working condition or the water from the tube wells is not good for drinking, 12.83% households have that the water from the community wells is not good for drinking, 10.94% households have reported that the self / own wells are also not in good condition, 33.2% households have reported that water from the pond is not good for drinking and 5.28% households have reported that the river water is also not good for drinking

28.3% households have reported that there is no problem for them in getting water while, 71.65% households have reported some problems even after the implementation of ARWSP.

Out of these 71.65% households, 25.26% households have reported that they will not get adequate quantity of water, 65.78% households have reported that sources of water used to get dried



up at times, 43.15% have reported that the water sources is at a very long distance, 14.73% households have reported that they get dirty/unhygeinic water, 3.68% households have reported that people belonging all the castes were not allowed to take water from the water source, 1.5% households have reported that there is irregular supply of water during day time and 0.5% households have reported that there is irregular supply of water daily (Refer Table No. 3.59 also).

TABLE NO. 3.59

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO THE PROBLEMS REPORTED

<u>PROBLEMS</u>	<u>NO. OF HOUSEHOLDS</u>
Sources of water used to get dried up at times	125
Distance of source of water was long	82
Adequate quantity of water not available	48
Unhygeinic water was available	28
All caste were not allow to take water from the water source everytime	7
Irregular supply daily	4

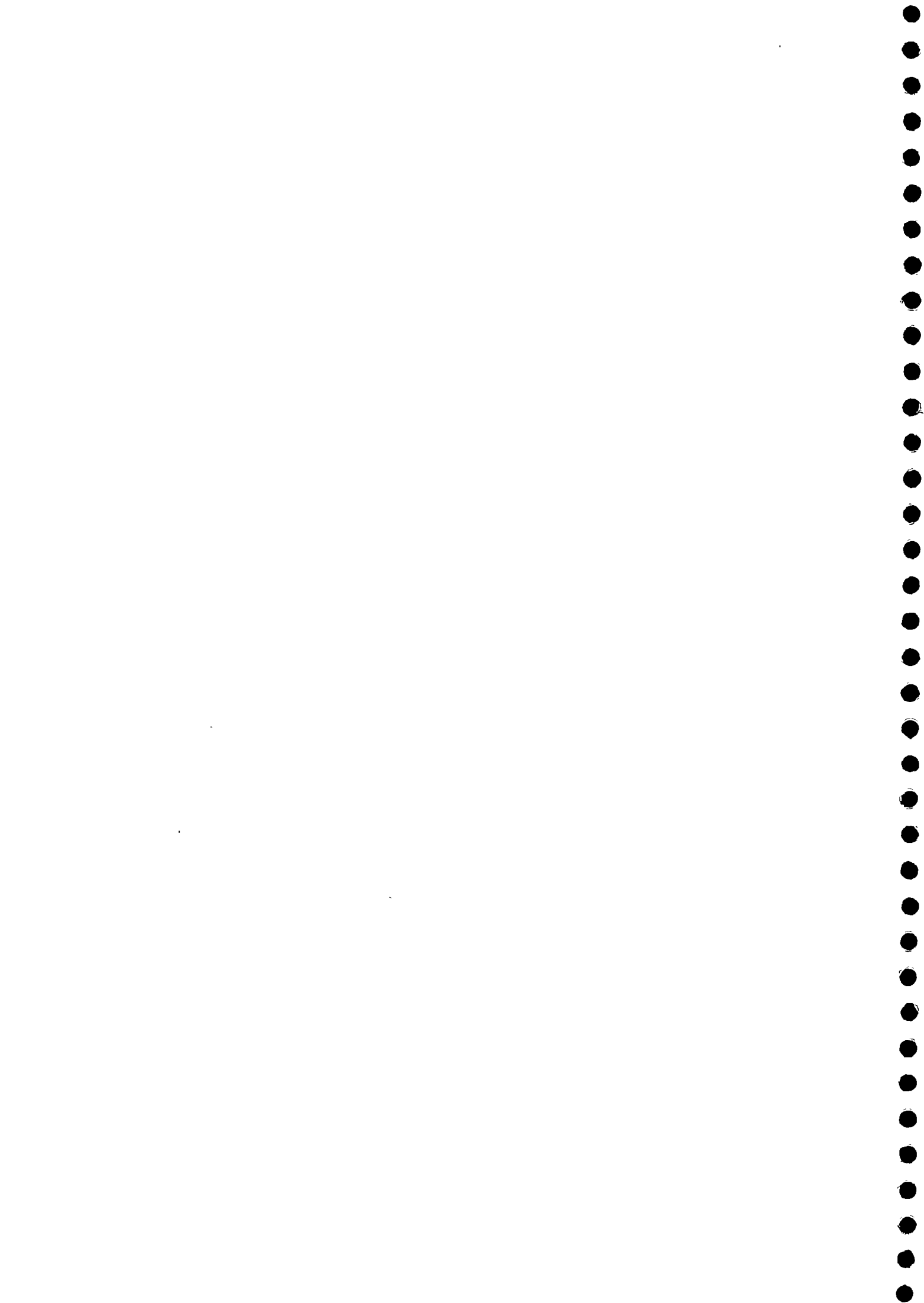
Duration of scarcity of water

Out of the total 265 households surveyed, 67.54% households have reported that there will be scarcity of water for 1-2 months, 11.32% households have reported that there will be scarcity of water for 3-4 months & 0.75% households have reported that there will be scarcity of water for 9-10 months (Refer Table No. 3.60 also).

TABLE NO. 3.60

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO DETAILS OF WATER SOURCES AND PROBLEMS AFTER ARWSP

<u>PERIOD (IN MONTHS)</u>	<u>NO. OF HOUSEHOLDS</u>
1-2	179
3-4	30
9-10	2



Quantity of Water available during scarcity & non-scarcity period

**For cooking and drinking**

During scarcity period the daily per capita availability of 21.5% households for drinking and cooking is upto 10 litres of water, of 31.69% households is 10-20 litres of water, of 27.54% households is 20-30 litres of water, of 11.69% households is 30-40 litres of water & of 7.54% households is 40-50 litres of water.

During non-scarcity period the daily per capita availability of 16.6% households for drinking and cooking is upto 10 litres of water, of 31.32% households is 10-20 litres of water, of 27.54% households is 20-30 litres of water, of 15.47% households is 30-40 litres of water & of 8.67% households is 40-50 litres of water.

**For washing purpose**

During scarcity period the per capita daily availability of 9.05% households for washing clothes is upto 10 litres of water, of 25.28% households is 10-20 litres, of 34.33% households is 20-30 litres, of 13.2% households is 30-40 litres, of 7.54% households is 40-50 litres and of 10.52% households is 50-140 litres of water.

During non-scarcity period the per capita daily availability of 16.97% households for washing clothes is upto 20 litres of water, of 41.88% households is 20-30 litres, of 13.2% households is 30-40 litres, of 15.84% households is 40-50 litres & of 12.04% households is 50-140 litres of water.

Availability of water for animals

During scarcity period according to 28.67% households for animals they get 100 litres of water, according to 13.58% households they get 101-150 litres of water, according to 7.54% households they get 151-200 litres of water, according to 3.77% they get 201-250 litres of water, according to 4.15% households they get 251-300 litres of water, according to 3.39% households they get 301-350 litres of water, according to 1.88% households they get 351-400 litres of water & according to 1.88% households they get 401-450

During non-scarcity period according to 2.26% households for animals they get 100 litres of water, according to 12.07% households they get 101-150 litres of water, according to 9.05% households they get 151-200 litres of water, according to 4.9% they get 201-250 litres of water, according to 6.41% households they get 251-300 litres of water, according to 3.01% households they get 301-350 litres of water, according to 8.20% households they get 351-500 litres of water. (Refer Table No. 3.61 also)

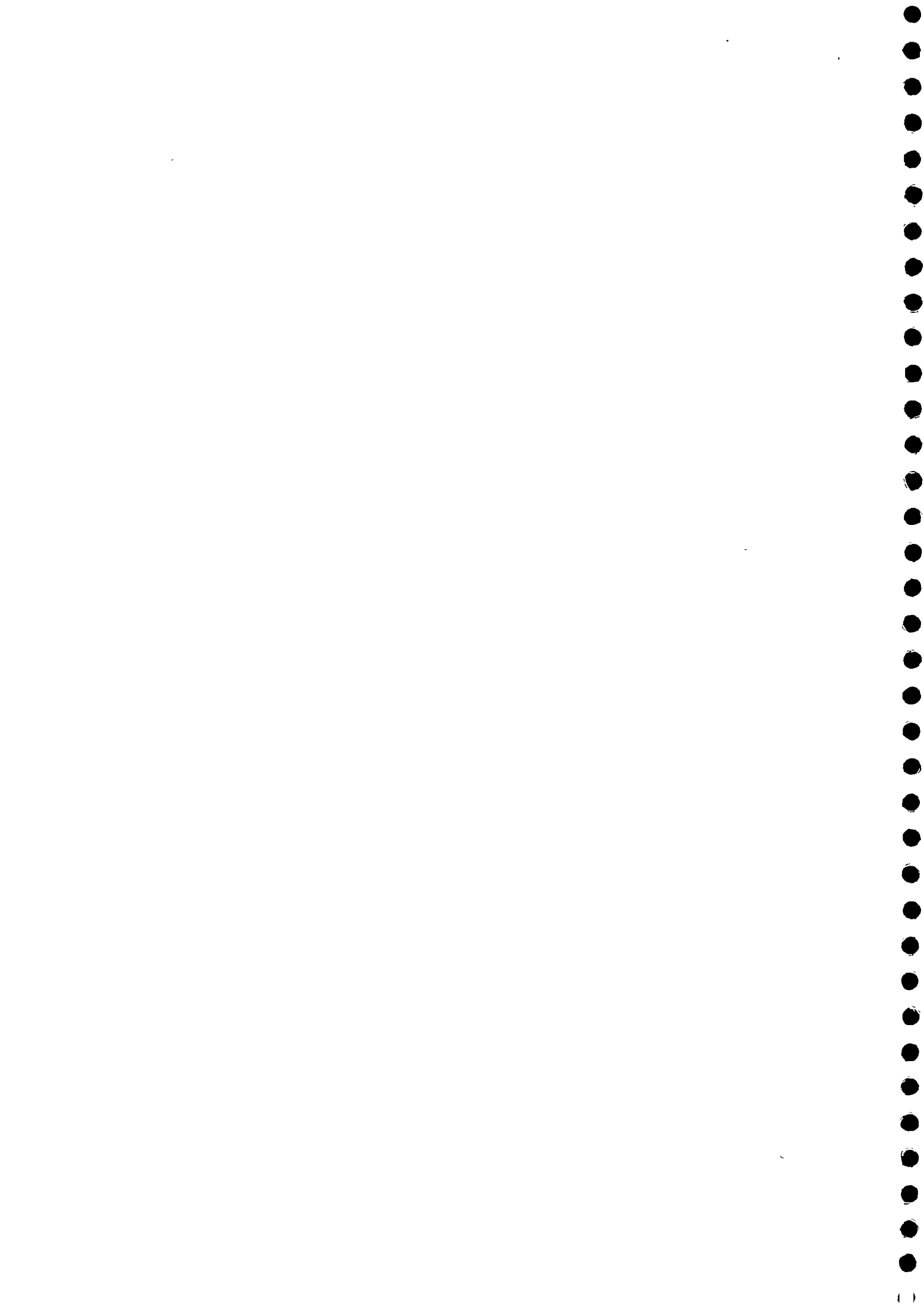




TABLE NO. 3.61

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO CURRENT AVAILABILITY OF WATER SUPPLY DURING SCARCITY AND NON-SCARCITY PERIOD

PURPOSE	>100	101-150	151-200	201-350	251-300	301-350	351-400	401-450	451-
<u>During Scarcity</u>									
For Cooking	184	42	25	10	2	-	1	-	-
For Washing	108	64	32	24	16	10	7	5	5
For Animals	76	36	20	10	11	9	5	5	5
Total	6	20	36	36	36	21	21	10	48
<u>During Non-Scarcity</u>									
For Cooking	159	52	31	15	5	1	1	-	-
For Washing	50	78	51	28	18	15	12	9	3
For Animals	61	32	24	13	17	8	11	5	2
Total	3	20	19	32	25	37	20	10	46

Operation and Maintenance of Water Source

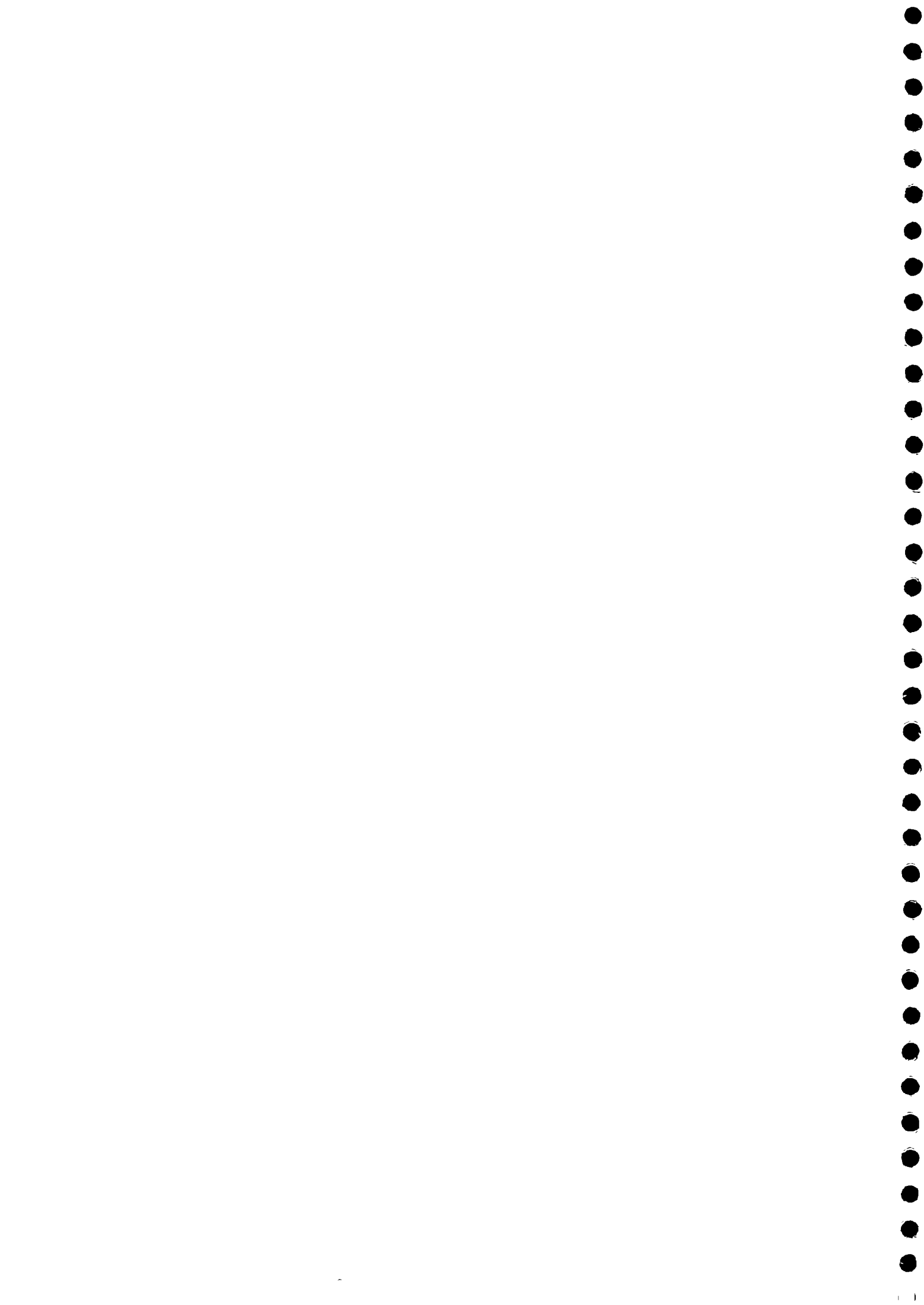
Persons responsible for the operation and maintenance

It is reported that for the operation and maintenance of water source, community is responsible according to 38.49% households, PHED is responsible according to 34.71% households and individuals is responsible according to 0.37% households. (Refer Table No. 3.62 also).

TABLE NO. 3.62

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO THE PERSONS RESPONSIBLE FOR O & M

PERSONS / ORGANISATIONS	NO. OF HOUSEHOLDS
Community	102
PHED	92
Individuals	1



Cost of operation and maintenance of water source

The cost of operation and maintenance of water source is met by PHED according to 44.9% households, it is met by the community according to 30.56% households, according to 5.66% households no body meets the cost of operation and maintenance and it is met by individual persons according to 1.88% households. (Refer Table No. 3.63 also).

TABLE NO. 3.63

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO THEIR OPINION ABOUT WHOM SHOULD MEET THE COST OF O & M

<u>PERSONS / ORGANISATIONS</u>	<u>NO. OF HOUSEHOLDS</u>
PHED	119
Community	81
No one	15
Individuals	5

Opinion about the present system of operation and maintenance of water source

58.11% households were satisfied with the present system of operation and maintenance while 41.88% households were not satisfied with the present water supply system.

Out of the 41.88% households who were not satisfied, 89.18% households have reported that adequate funds were not available.

Functional status of water supply source

According to 49.81% households hand pumps are functioning properly, according to 7.16% households the hand pumps are not functioning properly and according to 22.64% households the hand pumps are not at all functioning.

Frequent non-functioning of source of water

0.37% households were of the opinion that the hand pumps stops functioning once in a week, 1.13% households were of the opinion that the hand pumps stops functioning once in a fortnight, 3.01% households were of the opinion that it stops functioning once in a month. 6.03% households were of the opinion that it stops functioning once in 2 months, 21.5% households were of the opinion that it stops functioning once in 3 months, 26.41% households were of the opinion that it stops functioning once in a year & 4.15% households were of the opinion that it stops functioning once in 2 years. (Refer Table No. 3.64 also).



TABLE NO. 3.64

FREQUENCY OF THE SOURCE GOING OUT OF ORDER

<u>FREQUENCY</u>	<u>NO. OF HOUSEHOLDS</u>
Once in a week	1
Once in a fortnight	3
Once a month	8
Once in 2 months	16
Once in a quarter	57
Once in a year	70
Once in 2 years	11

Reasons for non-functioning of the source of water

According to 22.64% households it is because of improper use, 13.2% households were of the opinion that it is because of the installation of substandard equipments, according to 10.56% households it is because of faulty installation and according to 10.18% households it is because of natural calamities and. (Refer Table No. 3.65 also).

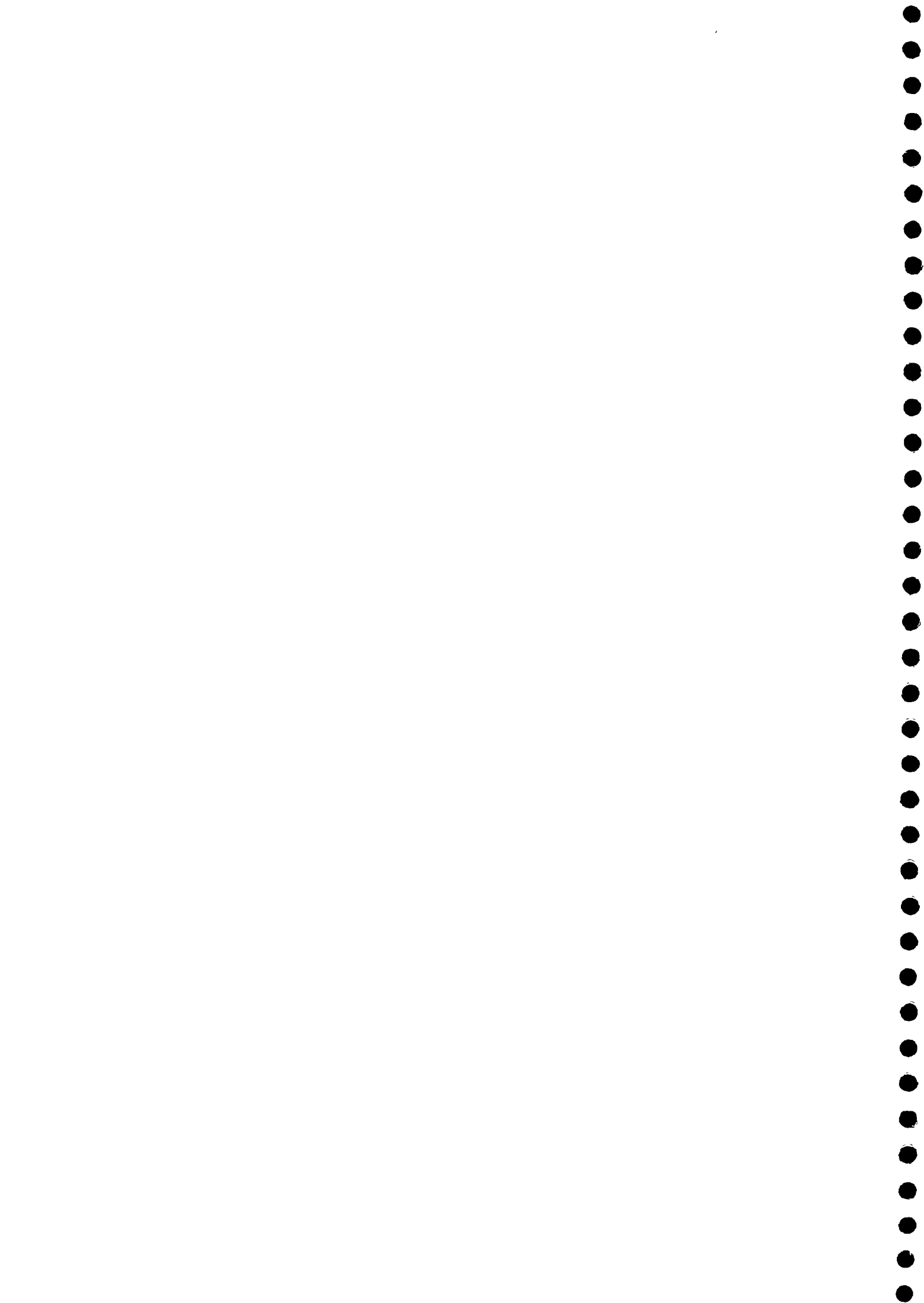
TABLE NO. 3.65

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO REASONS REPORTED FOR THE WATER SOURCE GOING OUT OF ORDER

<u>REASONS</u>	<u>NO. OF HOUSEHOLDS</u>
Improper use	60
Substandard equipment	35
Faulty installation	28
Damage due to natural calamities	27

Cost for proper and regular water supply

Villager's views were elicited about whom should meet the cost for proper and regular water supply. According to 96.6% households government should meet the cost, according to 0.37% households panchayat should meet the cost & according to 0.37% households self/community should meet the cost of installation of water source



According to 64.15% households government should meet the cost, according to 21.88% households panchayat and government jointly should meet the cost, according to 6.03% households self/community should meet the cost of O & M & according to 4.52% households NGO should meet the cost (Refer Table No 3.66 also)

TABLE NO. 3.66

OPINION ABOUT THE PERSON WHOM SHOULD MEET THE COST OF WATER SUPPLY

	INSTALLATION	MAINTENANCE
Government	256	170
Panchayat	1	-
Government & Panchayat jointly	-	12
Self/Community	1	58
PHED	-	16

Extent and sharing pattern of the cost of installation / operation and maintenance

Villager's opinion were asked about the extent and sharing pattern of the cost of installation. According to 59.24% households there should be equal share per household, according to 4.88% households it should be proportionate to number of family members and according to 0.75% households it should be proportionate to actual water consumption.

80.75% households were of the opinion that the amount should be less than Rs. 20/-, 0.75% were of the opinion that it should be in between Rs. 21-40/- while there was no response from others.

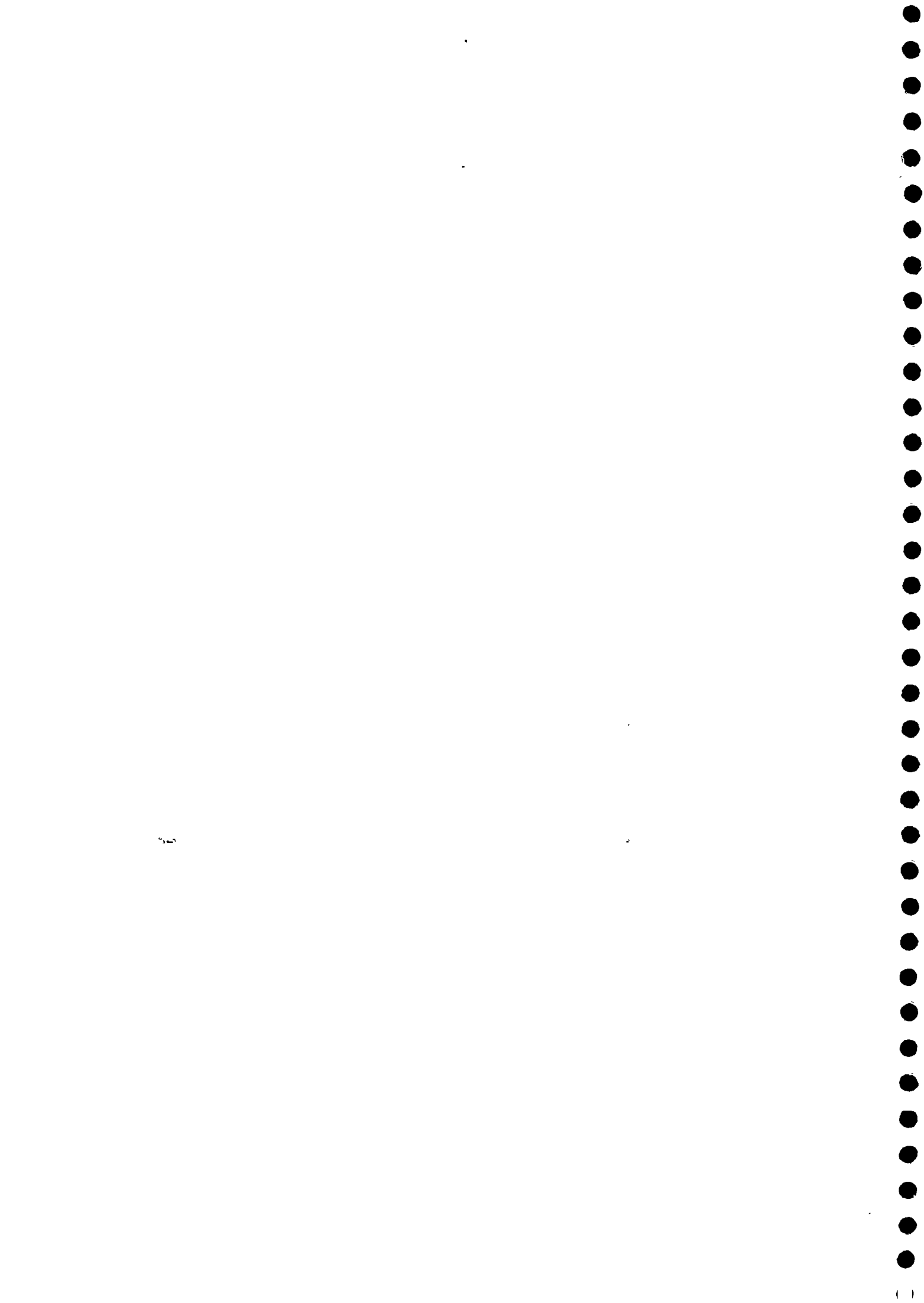
Contribution for the installation of water source

It is reported that 4.9% households have contributed some amount and 95.09% households have not contributed any thing for the implementation of water source.

Out of the 4.9% households who have contributed some amount, it is reported that 7.69% households have contributed an amount below Rs. 100/-, 69.23% households have contributed Rs.101-300 & 23.07% households have reported that they contributed Rs. 301-500

Status of Hygienic Conditions around Water source

7.92% households have reported that hygienic condition is not maintained around the water source and 92.07% households have reported that hygienic condition is maintained around the water source.





Out of the 7.92% households who felt that hygienic condition is not maintained around the water source, 52.3% households felt that it is because there was no proper drainage system, 4.76% households felt that it is because the location was not proper, 38.09% households felt that it is because necessary repairs are not done, 4.76% households felt that it is because cleanliness is not maintained properly & 9.52% households felt that it is because of some other reasons.

#### Quality of the water supply

Villagers were asked about the quality of water available for cooking and drinking. But they were unable to express whether they are getting hygienic or unhygienic water. Because of the lack of awareness they were unable to differentiate the quality of water. They use all types of water for cooking and drinking without checking its quality. Thus 98.48% households were of the opinion that the water supplied is fit for drinking while, 1.52% households were of the opinion that it is not fit for drinking. Around 99% households have reported that there is no facility of checking/testing water in their village nor near by their village.

#### Testing drinking water or pollution check

Around 98.12% households have reported that there is no regular checking of drinking water in their village.

Out of the 98.12% households who have reported that there is no regular checking of drinking water in their village, 24.61% households felt that it is because checking is not done in time, 76.53% households felt that there is no facility for checking drinking water, 0.37% felt that it is not sure that clean water is coming through water sources or not and 4.23% households felt that cleanliness is not maintained around the water source.

#### Water borne diseases after rural water supply programme

The occurrence of water borne diseases like diarrhoea decreased according to 30.56% households and not changed according to 23.39% households. The occurrence of cholera decreased according to 43.39% households and not changed according to 1.13% households. The occurrence of typhoid decreased according to 26.41% households and not changed according to 1.5% households. The occurrence of malaria decreased according to 29.05% households, increased according to 5.28% households and not changed according to 13.58% households, skin diseases decreased according to 0.75% households and other diseases also decreased according to 5.28% households. (Refer Table No. 3.67 also)

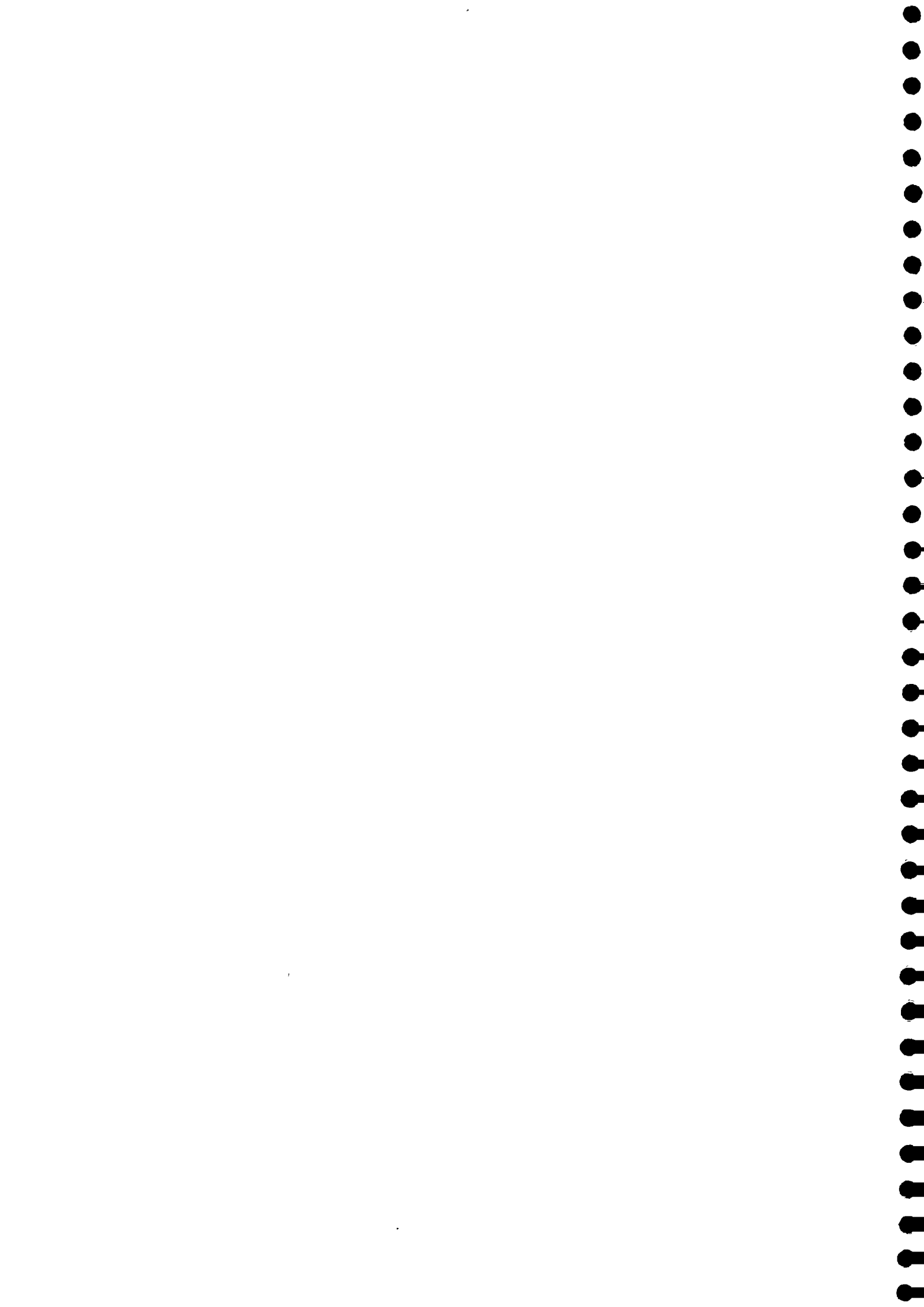
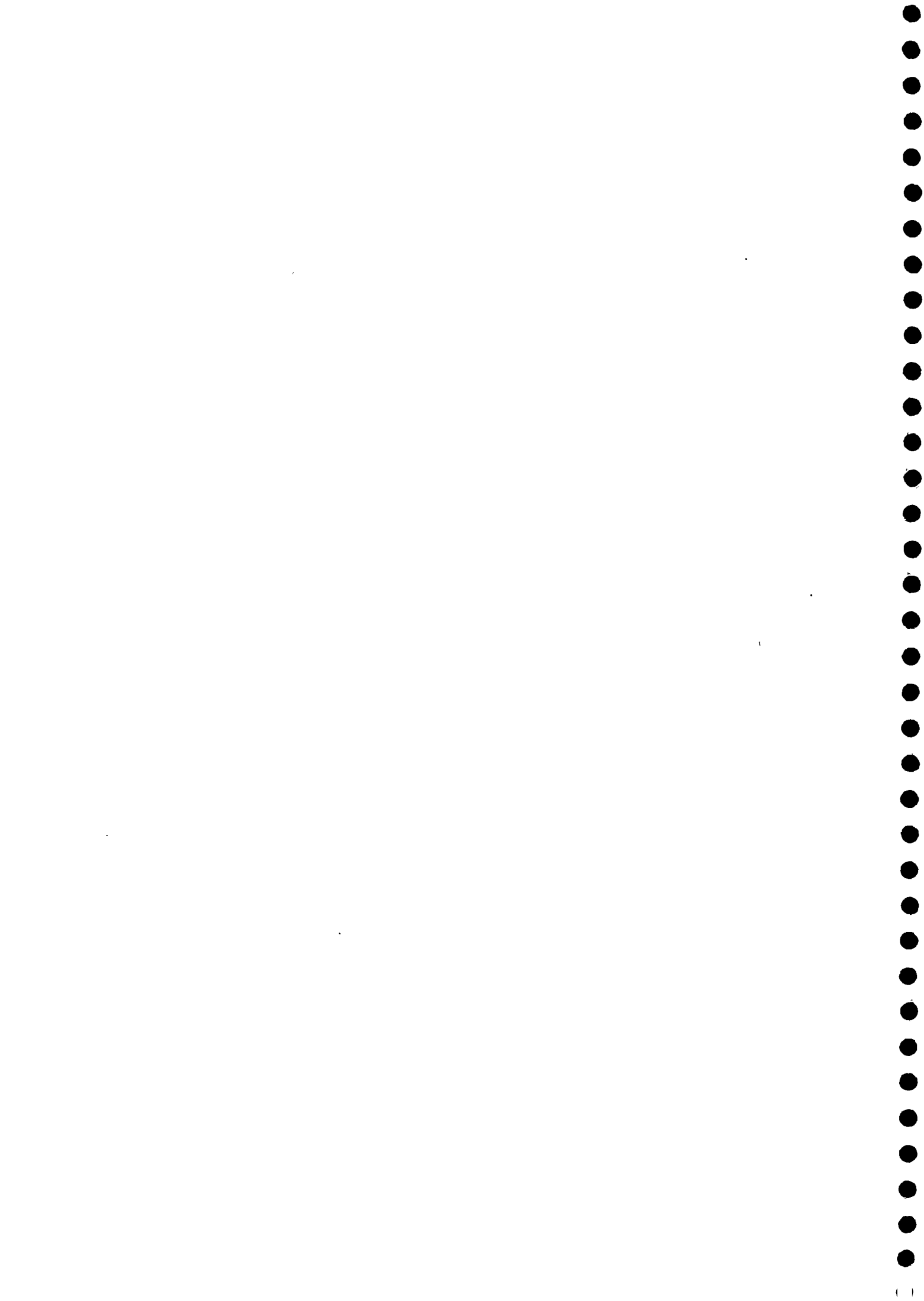


TABLE NO. 3.67

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO OCCURRENCE  
OF WATER BORNE DISEASES

DISEASES	DECREASED	NO CHANGE	INCREASED
Diarrhoea	81	62	3
Cholera	115	3	-
Typhoid	70	4	2
Malaria	77	36	14
Skin infection	2	-	-
Others	14	1	3



SURVEY FINDINGS - GUMLA

262 households were surveyed in Gumla district for data collection. The analysis of the data is given below based on different variables.

Per Capita requirement of water

**For cooking and drinking**

Out of the total 262 households surveyed it is reported that the per capita daily requirement for cooking and drinking of 41.98% households is upto 10 litres of water, of 29.77% households is 10-20 litres, of 7.63% households is 20-30 litres, of 75.64% is 30-40 litres & of 4.96% households is 40-50 litres.

**For washing**

Out of the total 262 households surveyed it is reported that the per capita daily requirement for washing purpose of 11.45% households is upto 10 litres of water, of 28.62% households is 10-20 litres, of 25.19% households is 20-30 litres, of 16.79% households is 30-40 litres & of 17.91% households is 40-90 litres of water.

**Total per capita requirement of water for cooking and washing**

The total per capita daily requirement of water for both cooking and washing purpose of 14.49% households is upto 20 litres, of 29.77% households is 20-30 litres, of 21.37% households is 30-40 litres, of 12.2% households is 40-60 litres, of 10.68% households is 60-80 litres & 11.05% households is 80-140 of water daily.

Requirement of water for animals

4.58% households have reported that they require 50 litres of water daily, 10.3% households have reported that they require 50-100 litres of water daily, 25.57% households have reported that they require 100-150 litres of water daily, 12.59% households have reported that they require 151-200 litres of water daily, 4.19% households require 201-250 litres of water daily & 6.85% households require 251-300 litres of water, 1.14% households require 301-350 litres of water, 0.76% households require 351-400 litres of water daily, 0.38% households require 401-450 litres of water, 0.38% households require 451-500 litres of water and 0.76% households require more than 500 litres of water daily. (Refer Table No. 3.68).

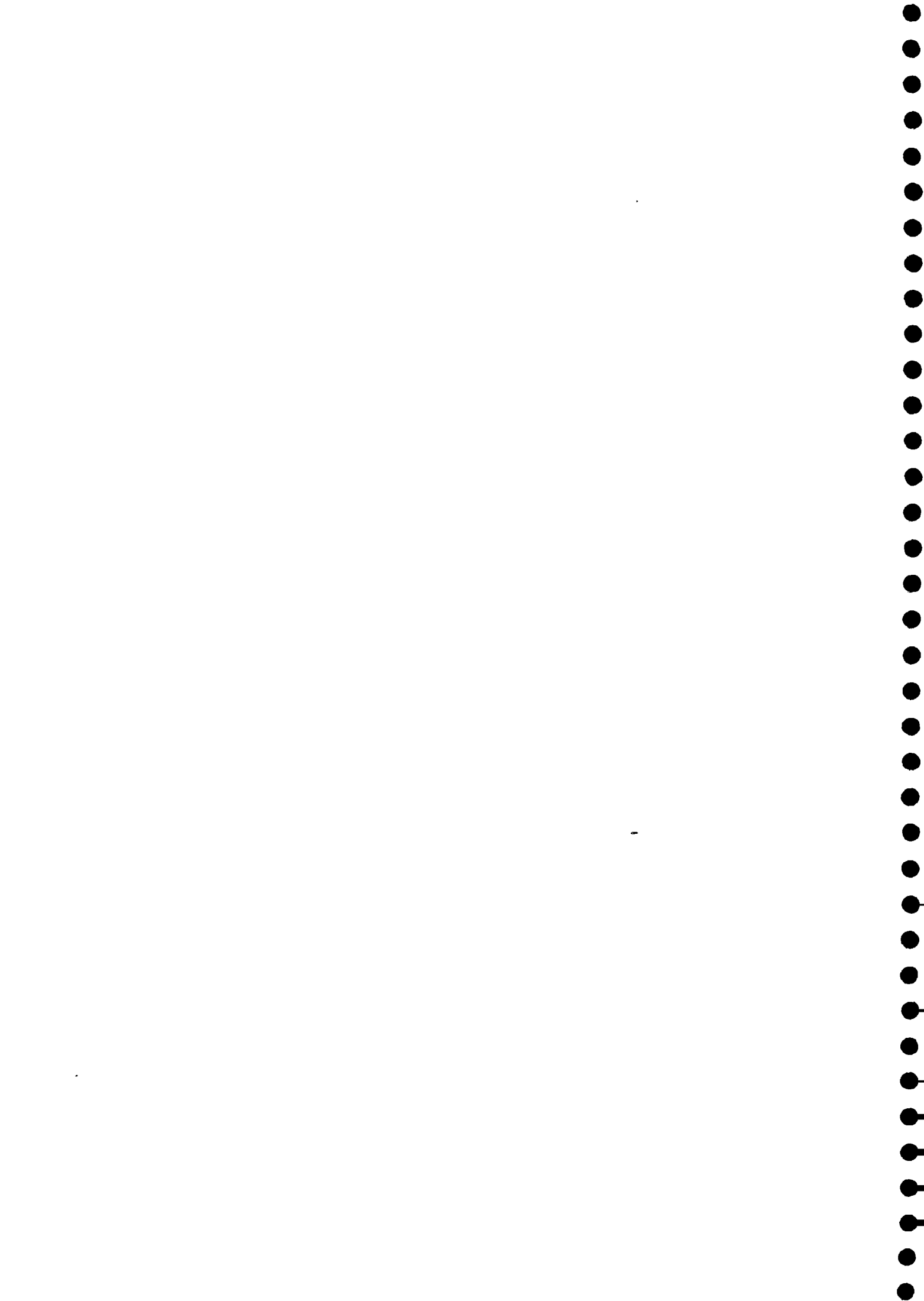


TABLE NO. 3.68

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO  
PER CAPITA REQUIREMENT OF WATER

<u>PER CAPITA</u> <u>REQUIREMENT</u>	<u>COOKING &amp;</u> <u>DRINKING</u>	<u>FOR WASHING</u> <u>CLOTHES</u>	<u>TOTAL</u>
0-10	110	30	4
10-20	78	75	34
20-30	20	66	78
30-40	41	44	56
40-50	12	28	21
50-60	0	3	11
60-70	0	9	16
70-80	1	6	12
80-90	-	1	11
90-100	-	-	14
100-110	-	-	1
110-120	-	-	1
120-130	-	-	1
130-140	-	-	1

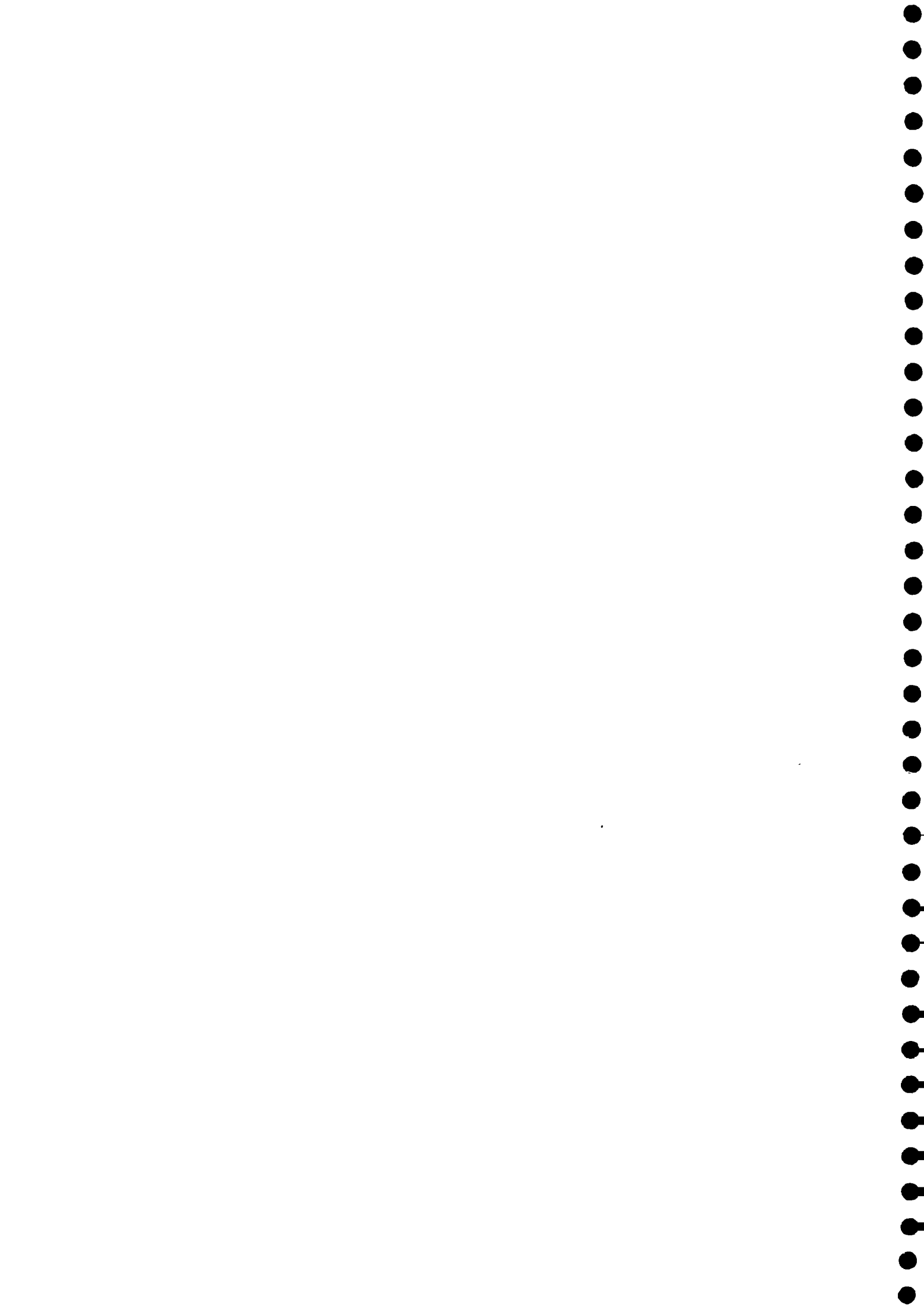
Sources and problems before rural water supply programme

**Sources for cooking**

Out of the total 262 households surveyed, 51.14% households have reported that they used to fetch water from the community well, 45.8% households have reported that they used to fetch water from their own well, 1.52% households have reported that they used to fetch water from pond and 7.25% households have reported that they used to fetch water from other natural sources like springs.

**For washing clothes**

50.38% households have reported that for washing clothes they used the water from the community well, 44.27% households have reported that they used the water of their





own well, 8.77% households have reported that they used the water from the pond, 0.76% households have reported that they used the water from river and 7.63% households have reported that they used the water from other natural sources.

**For animals**

14.88% households have reported that for animals they used the water from the community well, 33.58% households have reported that they used the water of their own well, 19.08% households have reported that they used the water from the pond, 1.25% households have reported that they used the water from the lake, 5.72% households have reported that they used the water from river and 8.01% households have reported that they used the water from other sources for this purpose. (Refer Table No. 3.69 also).

TABLE NO. 3.69

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO SOURCES OF WATER SUPPLY BEFORE ARWSP

PURPOSE	SOURCE					
	COMMUNITY WELL	OWN WELL	POND	LAKE	RIVER	OTHERS
FOR COOKING	134	120	4	-	-	19
FOR WASHING	132	116	23	-	2	20
FOR ANIMALS	39	88	50	4	15	21

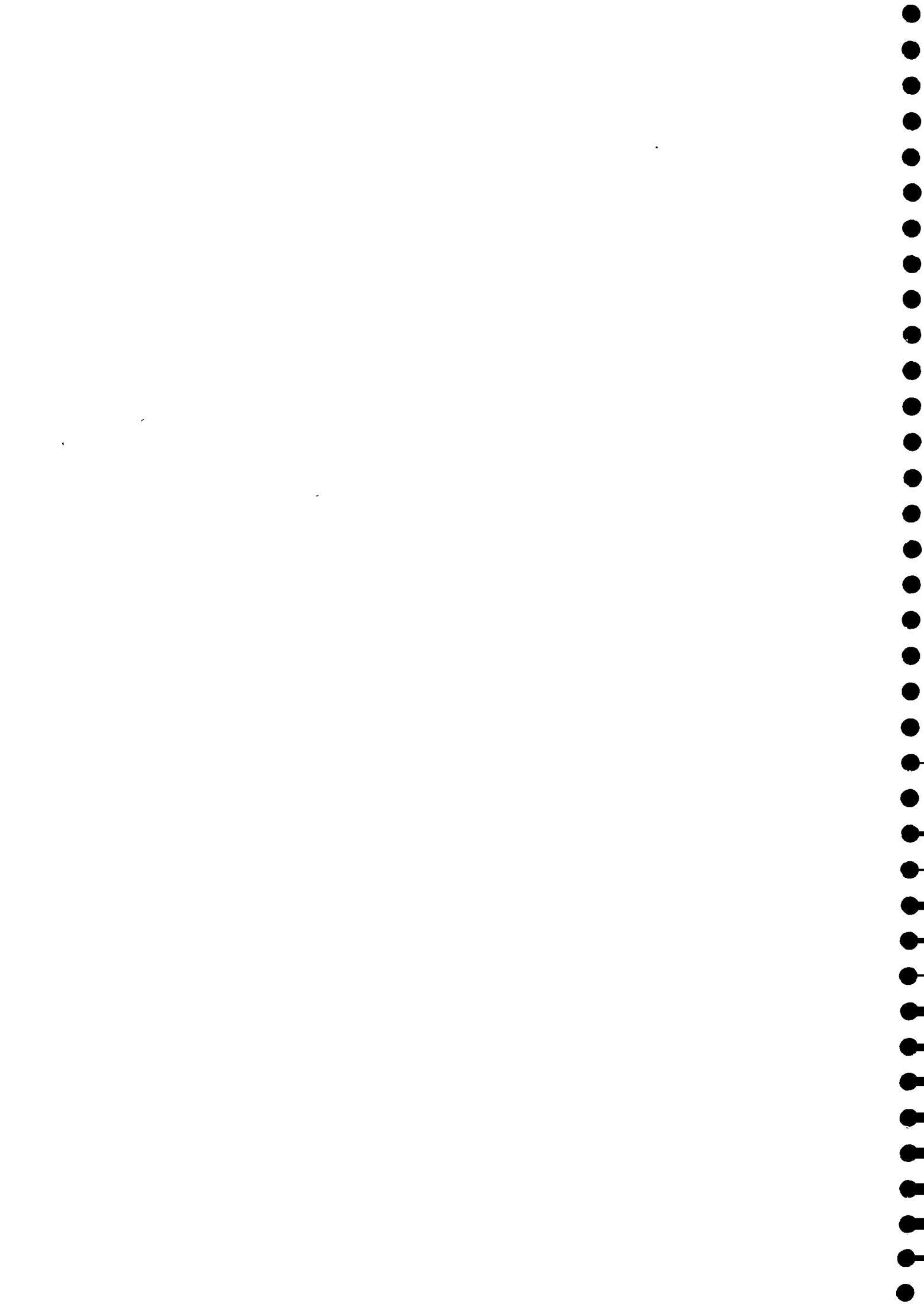
Fetching water for household purpose

Out of the total 262 households surveyed, 0.76% households have reported that only female fetch water & 99.23% households have reported that both male and female fetch water for household purpose. (Refer Table No. 3.70 also)

TABLE NO. 3.70

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO FETCHING WATER FOR HOUSEHOLD PURPOSE

ONLY FEMALE	ONLY MALE	MALE & FEMALE
2	-	260



Time taken and distance covered in bringing water

85.11% households have reported that they took 30 minutes to bring water, 10.68% households have reported that they take 31-45 minutes to bring water & 4.58% households have reported that they take 46-60 minutes of water.

22.13% households have reported that they bring water from a distance of 50 mts, 24.42% households have reported that they bring water from a distance of 51-100 mts, 20.99% households have reported that they bring water from a distance of 101-200 mts, 20.22% households have reported that they bring water from a distance of 201-500 mts, 8.77% households have reported that they bring water from a distance of 501-1000 & 3.81% households have reported that they bring water from a distance of more than 1000 mts. (Refer Table No. 3.71 also).

TABLE NO. 3.71

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO DISTANCE COVERED AND TIME TAKEN TO BRING WATER

TIME IN MINUTES	DISTANCE IN METRES					
	UPTO 50	51-100	101-200	201-500	501-1000	>1000
UPTO 30	58	62	51	32	10	10
31-45	-	2	4	17	5	-
46-60	-	-	-	4	8	-

Problems in getting water before rural water supply programme

The surveyed households were asked about the main problems they faced in getting water before rural water supply programme. 63.74% households have reported that sources of water used to get dried up at times, 44.27% households have reported that they used to get dirty/unhygeinic water, 29% households have reported that adequate quantity was not available, 27.09% households have reported that the water source was at a very long distance, 3.05% households have reported that there was irregular supply/availability of water and 5.34% households have reported some other problems also. (Refer Table No. 3.72 also).

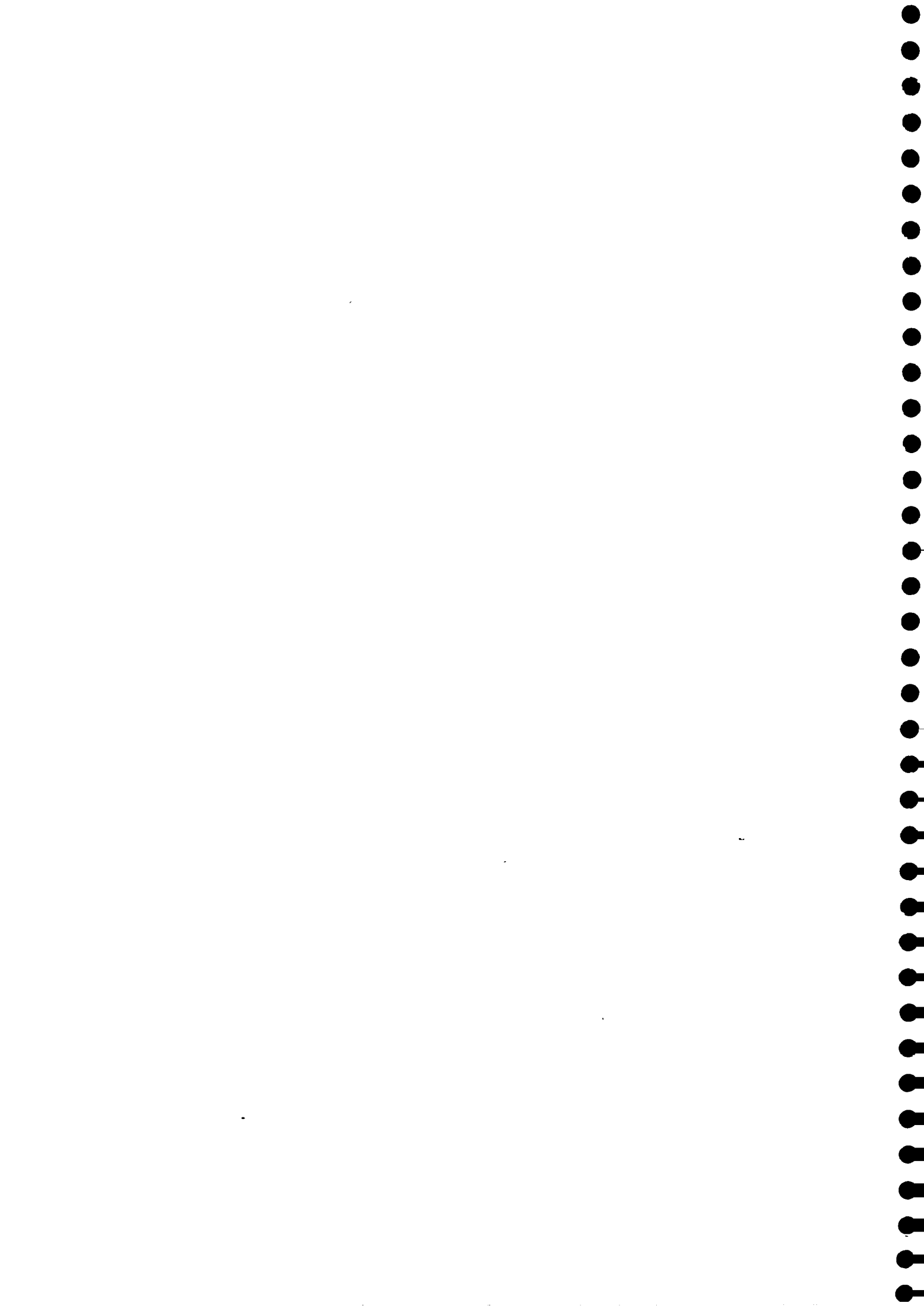


TABLE NO. 3.72

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO PROBLEMS  
IN GETTING WATER BEFORE ARWSP

<u>PROBLEMS FACED FOR GETTING WATER BEFORE ARWSP</u>	<u>NO. OF HOUSEHOLDS</u>
Sources of water used to get dried up at times	167
Water available was unhygeinic	116
Adequate quantity of water not available	76
Distance to the source of water was long	71
Irregular supply/availability	8
Any other	14

Current Water sources after rural water supply programme

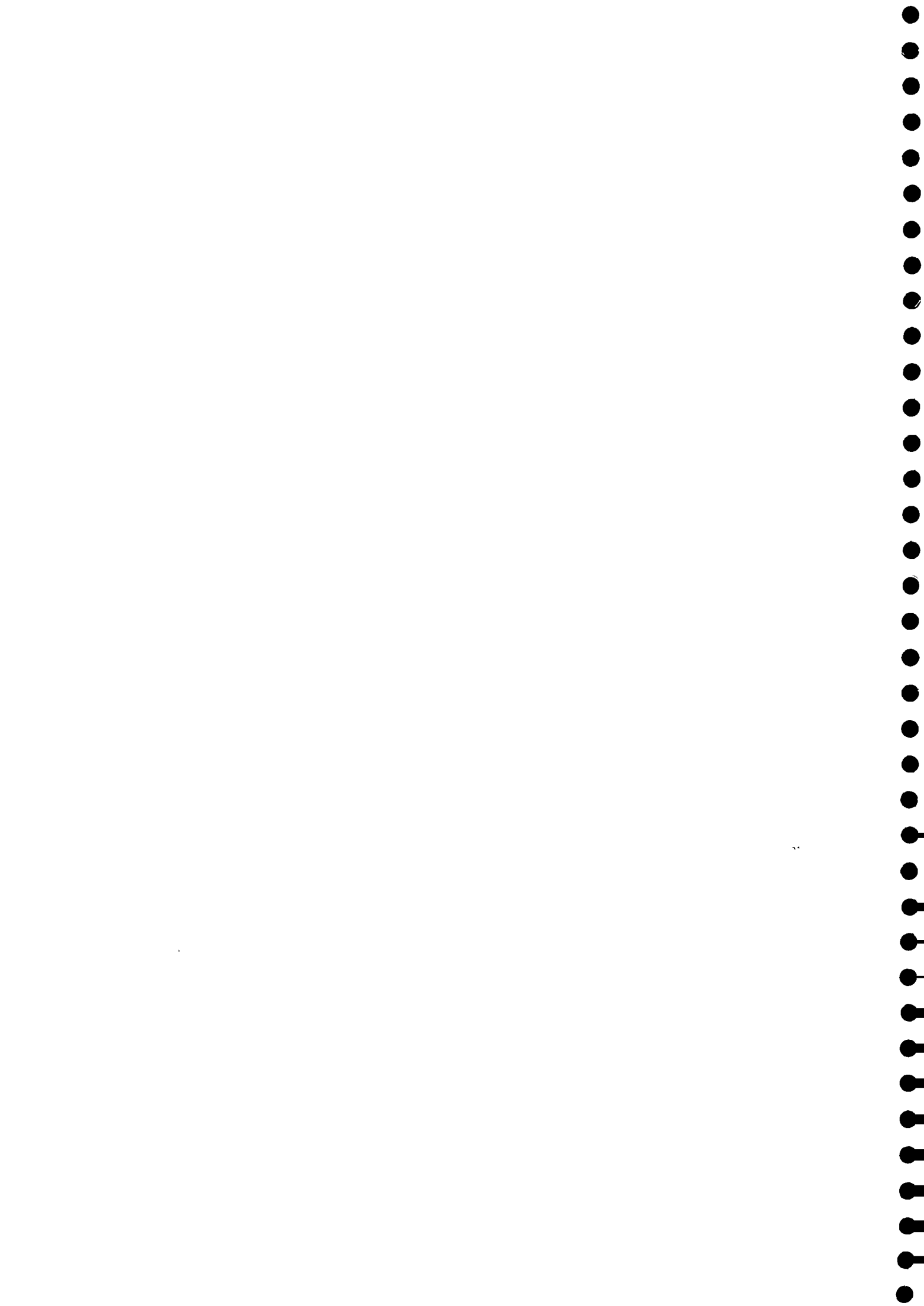
Out of the government water supply sources it is reported that 61.83% households use water from hand pumps. Out of the non-government water supply sources, it is reported that 34.35% households use water from community wells, 57.25% households use water from their own well, 3.43% households use water from ponds, 0.76% households use water from rivers and 0.38% households use water from other private sources like self pumps.

Distance of water source

12.59% households have reported that the hand pumps are at a distance of 0-50 mts, 32.44% households have reported that it is at a distance of 51-100 mts from their residence, 13.74% households have reported that it is at a distance of 101-150 mts, 6.87% households have reported that it is at a distance of 151-200 mts & 4.19% households have reported that it is at a distance of 201-500 mts.

2.67% households have reported that the community well is at a distance of 0-50 mts, 12.21% households have reported that it is at a distance of 51-100 mts from their residence, 10.68% households have reported that it is at a distance of 101-150 mts, 7.63% households have reported that it is at a distance of 151-200 mts & 2.67% households have reported that it is at a distance of 201-500 mts.

1.9% households have reported that the pond is at a distance of 51-100 mts, 2.67% households have reported that it is at a



distance of 101-150 mts from their residence, 5.72% households have reported that it is at a distance of 151-200 mts, 7.25% households have reported that it is at a distance of 201-500 mts, 1.52% households have reported that it is at a distance of 501-1000 mts.

5.34% households have reported that it is at a distance of 0-50 mts, 19.08% households have reported that the self well is at a distance of 51-100 mts, 9.16% households have reported that it is at a distance of 101-150 mts from their residence, 6.48% households have reported that it is at a distance of 151-200 mts, 4.58% households have reported that it is at a distance of 201-500 mts, 1.9% households have reported that it is at a distance of 501-1000 mts.

1.14% households have reported that it is at a distance of 51-100 mts from their residence, 1.14% households have reported that it is at a distance of 101-150 mts, 3.43% households have reported that it is at a distance of 151-200 mts, 0.38% households have reported that it is at a distance of 201-500 mts & 3.43% households have reported that it is at a distance of 501-1000 mts. (Refer Table No. 3.73).

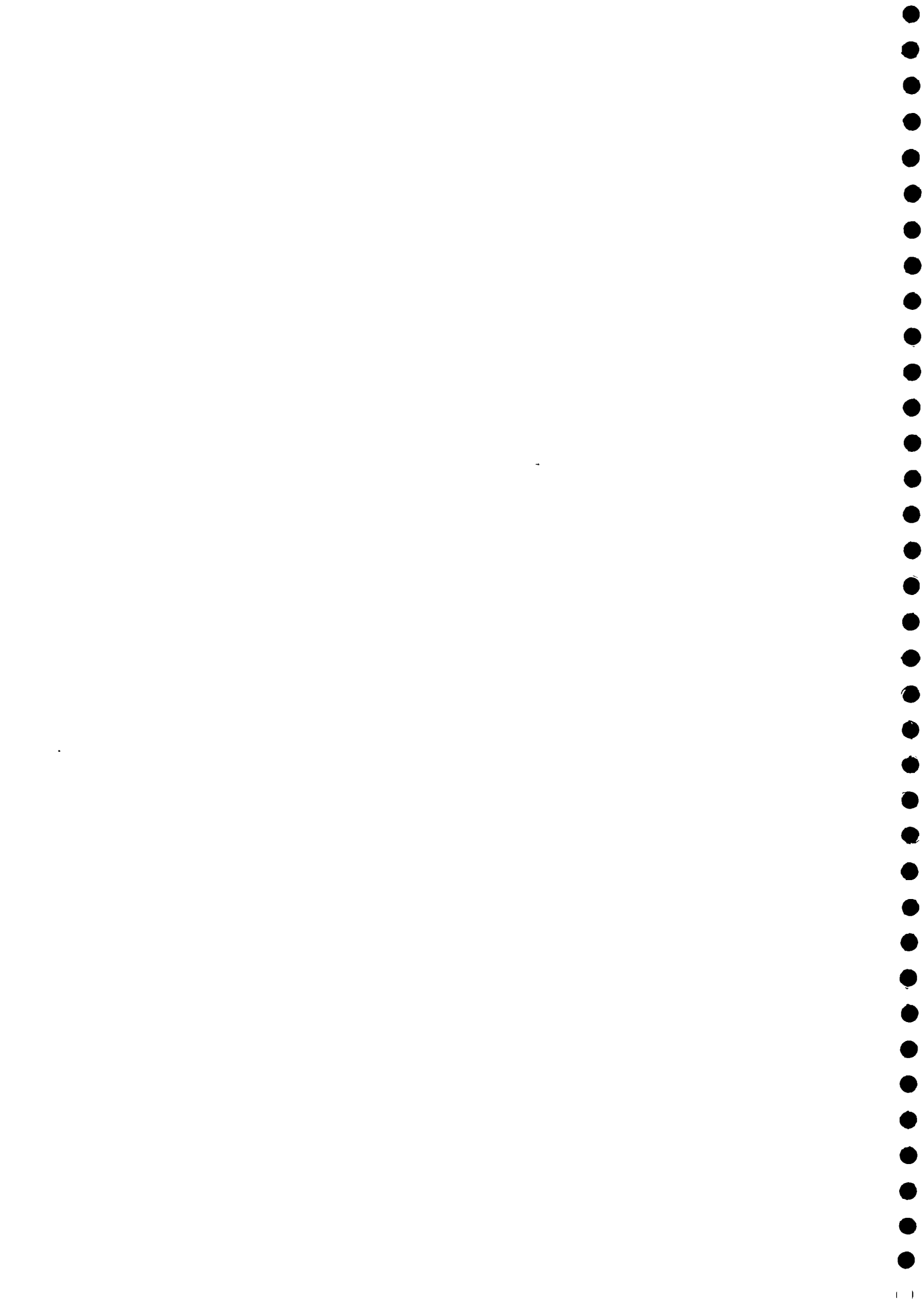
TABLE NO. 3.73

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO CURRENT SOURCE OF WATER SUPPLY AND QUALITY OF WATER

SOURCE	QUALITY		DISTANCE IN METRES						
	DRINKABLE	NON-DRINKABLE	0-50	51-100	101-150	151-200	201-500	501-1000	>1000
Hand pump	162	31	33	85	36	18	11	-	-
Community well	90	19	7	32	28	20	7	-	-
Own well	150	32	14	50	24	17	12	-	5
Pond	9	53	-	5	7	15	19	-	4
River	2	20	-	3	8	9	1	-	9
Others	1	-	9	1	4	1	2	4	-

Problems after rural water supply programme

Though there are water sources like community well, self / own wells, pond and river, 11.83% households have reported that the tube wells are not in working condition or the water from the tube wells is not good for drinking, 7.25% households have that the water from the community wells is not good for drinking, 12.21% households have reported that the self / own wells are also not in good condition, 20.22% households have reported that





water from the pond is not good for drinking and 7.63% households have reported that the river water is also not good for drinking

23.66% households have reported that there is no problem for them in getting water while, 76.33% households have reported some problems even after the implementation of rural water supply programme. Out of these 76.33% households, 64% households have reported that sources of water used to get dried up at time, 44.5% households have reported that they will not get adequate quantity of water, 39.5% have reported that the water sources is at a very long distance, 21.5% households have reported that they get dirty/unhygeinic water, 5% households have reported that there is irregular supply of water during day time, 2 29% households have reported that people belonging all the castes were no allowed to take water from the water source and 1.1% households have reported that there is irregular supply of water daily. (Refer Table No. 3.74 also).

TABLE NO. 3.74

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO THE PROBLEMS REPORTED

<u>PROBLEMS</u>	<u>NO. OF HOUSEHOLDS</u>
Sources of water used to get dried up at times	128
Adequate quantity of water not available	89
Distance of source of water was long	79
Unhygeinic water was available	43
Irregular supply daily	12
All caste were not allow to take water from the water source everytime	6

Duration of scarcity & non-scarcity of water

Out of the total 262 households surveyed, 69.08% households have reported that there will be scarcity of water for 1-2 montas, 16.41% households have reported that there will be scarcity of water for 3-4 months, 2.29% households have reported that there will be scarcity of water for 7-8 months, 2 29% households have reported that there will be scarcity of water for 9-10 months and 2.29% households have reported that there will be scarcity of water 11-12 months. (Refer Table No. 3.75 also).

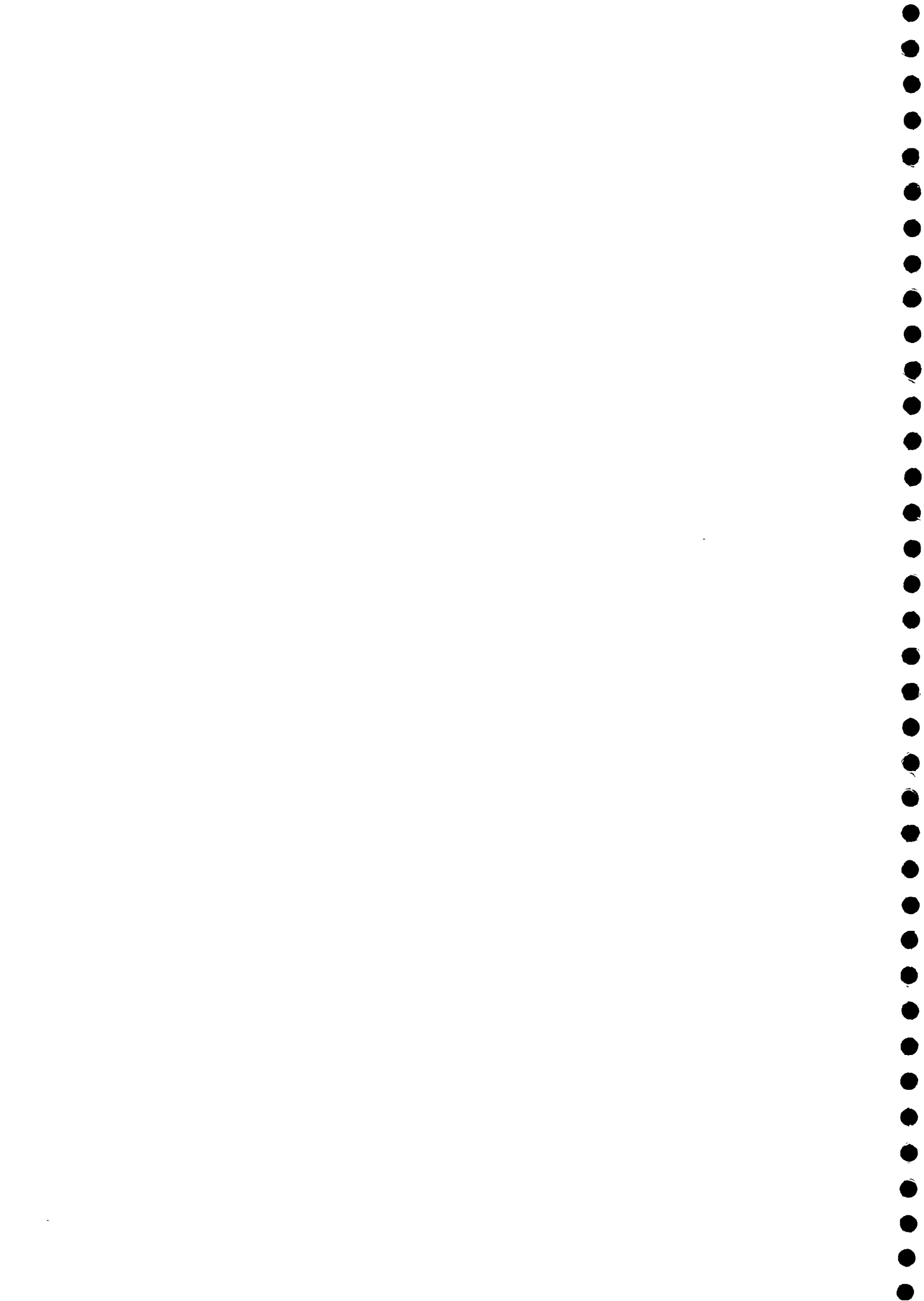


TABLE NO. 3.75

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO DETAILS  
OF WATER SOURCES AND PROBLEMS AFTER ARWSP

<u>PERIOD</u> <u>(IN MONTHS)</u>	<u>NO. OF HOUSEHOLDS</u>
1-2	181
3-4	43
9-10	6
11-12	6

quantity of Water available during scarcity & non-scarcity period

**For cooking and drinking**

During scarcity period the daily per capita availability of water for cooking and drinking 34.73% households is upto 10 litres of water, of 32.44% households is 10-20 litres, of 22.13% households is 20-30 litres, of 6.87% households is 30-40 litres and of 3.81% households is 40-50 litres.

During non-scarcity period the daily per capita availability of water for cooking and drinking 31.67% households is upto 10 litres of water, of 27.09% households is 10-20 litres, of 24.42% households is 20-30 litres, of 11.06% households is 30-40 litres and of 5.72% households is 40-90 litres.

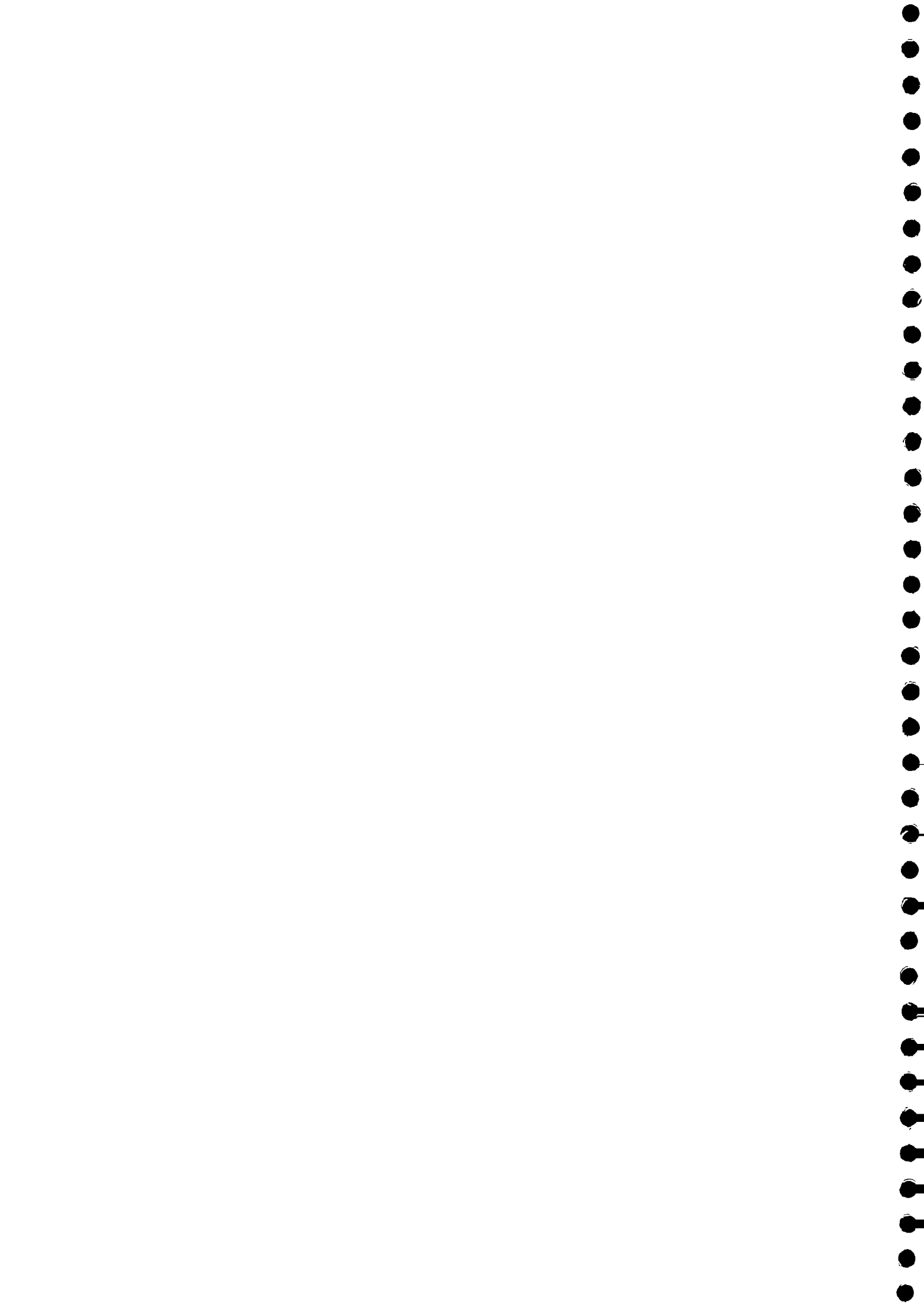
**For washing**

During scarcity period the daily per capita availability of water for washing clothes 33.76% households is upto 20 litres of water, of 28.24% households is 20-30 litres, of 10.3% households is 30-40 litres & of 8.77% households is 40-90 litres.

During non-scarcity period the daily per capita availability of water for washing clothes 35.87% households is upto 20 litres of water, of 32.82% households is 20-30 litres, of 14.12% households is 30-40 litres & of 17.16% households is 40-120 litres.

Availability of water for animals

During scarcity period according to 31.67% households for animals they get 100 litres of water, according to 18.7% households they get 101-150 litres of water, according to 9.16% households they get 151-200 litres of water & according to 6.32%



they get 201-450 litres of water.

During non-scarcity period according to 14.88% households for animals they get 100 litres of water, according to 32.13% households they get 101-150 litres of water, according to 17.17% households they get 151-200 litres of water, according to 5.34% they get 201-250 litres of water & according to 5.32% households they get 251-450 litres of water. (Refer Table No. 3.76).

TABLE NO. 3.76

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO CURRENT AVAILABILITY OF WATER SUPPLY DURING SCARCITY AND NON-SCARCITY PERIOD

PURPOSE	QUANTITY IN LITRES								
	>100	101-150	151-200	201-250	251-300	301-350	351-400	401-450	451-500
<u>During Scarcity</u>									
For Cooking	191	49	16	2	2	1	1	-	-
For Washing Clothes	132	67	37	13	9	1	1	1	-
For Animals	83	49	24	9	2	1	1	1	-
Total	11	24	35	38	53	21	15	12	-
<u>During Non-Scarcity</u>									
For Cooking	173	39	28	15	3	-	2	2	-
For Washing Clothes	51	96	56	33	14	2	7	2	-
For Animals	39	58	45	14	8	1	2	3	-
Total	6	10	31	32	21	28	28	14	93

Operation and Maintenance of Water Source

Persons responsible for the operation and maintenance

It is reported that for the operation and maintenance of water source community is responsible according to 52.67% households, village panchayat is responsible according to 14.88% households, individuals are responsible according to 3.05% households. (Refer Table No. 3.77 also).

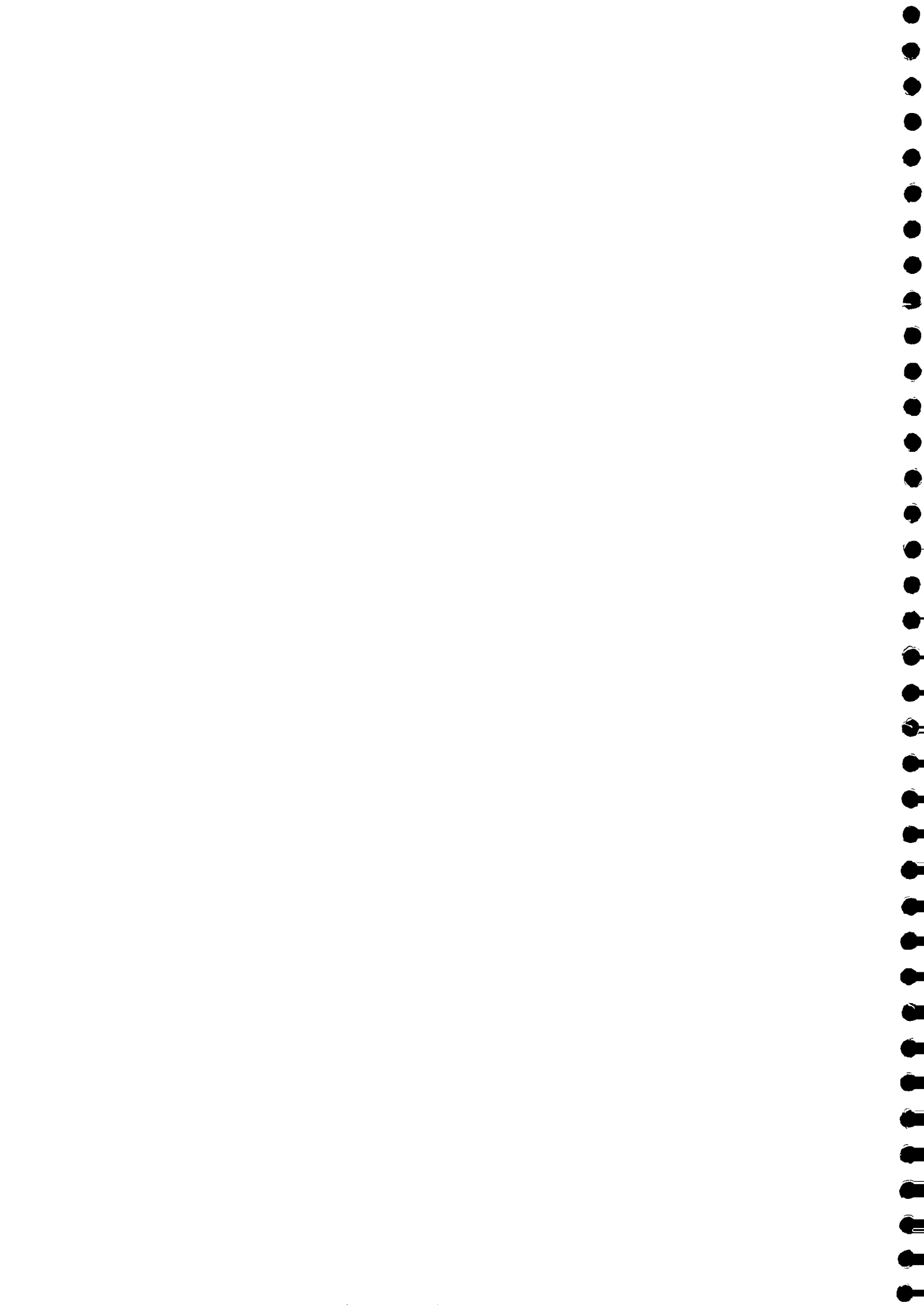


TABLE NO. 3.77

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO  
THE PERSONS RESPONSIBLE FOR O & M

<u>PERSONS / ORGANISATIONS</u>	<u>NO. OF HOUSEHOLDS</u>
Community	138
PHED	39
Individuals	8

Cost of operation and maintenance of water source

The cost of operation and maintenance of water source is met by the community according to 49.23% households, it is met by PHED according to 19.46% households met by individual persons according to 3.05% households, it is met by the village panchayat according to 0.37% households (Refer Table No. 3.78 also).

TABLE NO. 3.78

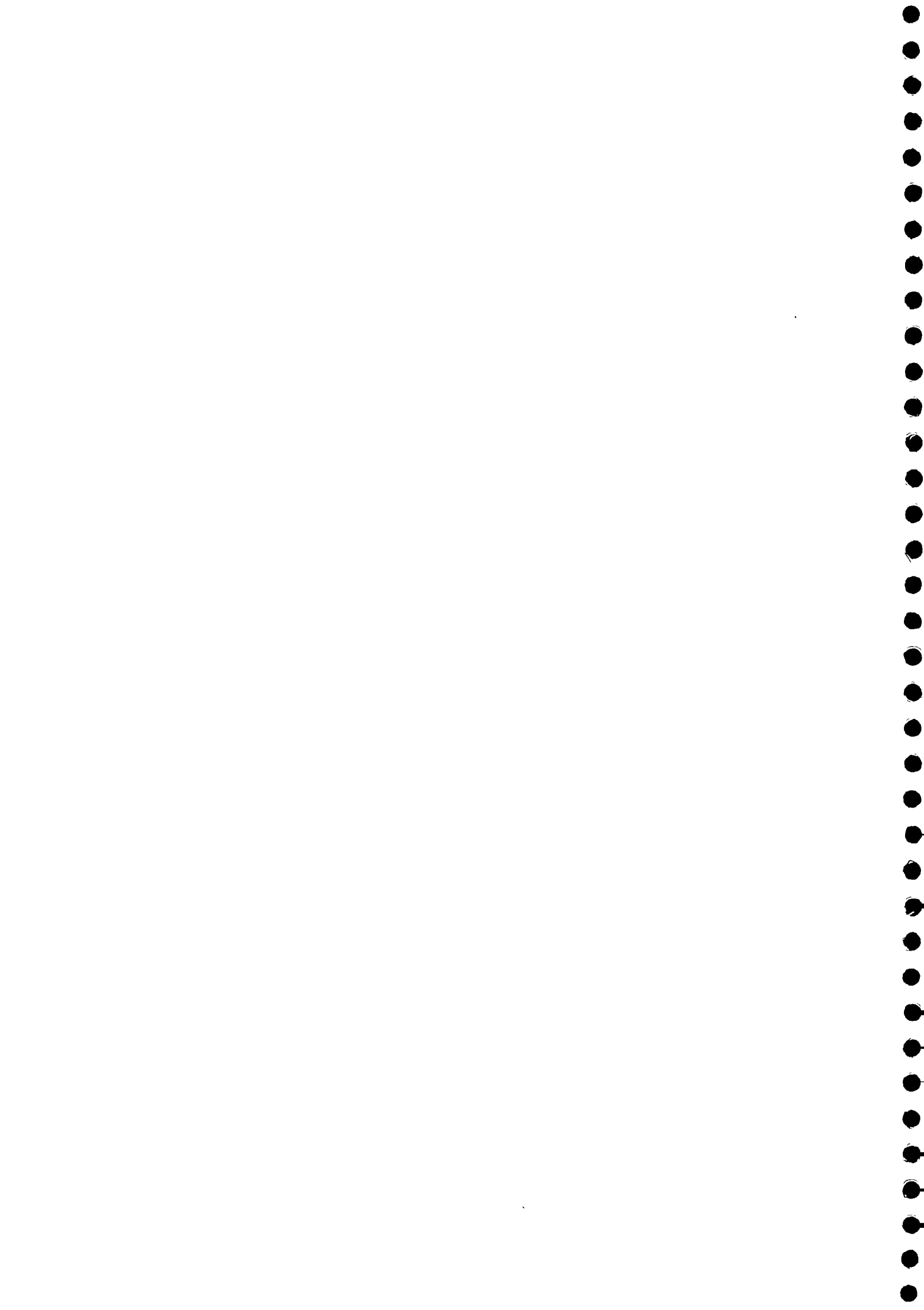
DISTRIBUTION OF HOUSEHOLDS ACCORDING TO THEIR OPINION  
ABOUT WHOM SHOULD MEET THE COST OF O & M

<u>PERSONS / ORGANISATIONS</u>	<u>NO. OF HOUSEHOLDS</u>
Community	129
PHED	51
Individuals	8
Village Panchayat	1

Opinion about the present system of operation and maintenance of water source

72.91% households were satisfied with the present system of operation and maintenance while 27.09% households were not satisfied with the present water supply system.

Out of the 27.09% households who were not satisfied, 4.08% households have reported that trained manpower was not adequate in number, 100% households have reported that adequate funds were not available, 4.08% households have reported that people did not pay their share, 4.08% households have reported that responsibility of operation and maintenance is not fixed and 8.16% households have reported some other reasons also





Functional status of source of water supply

According to 46.56% households hand pumps are functioning properly, according to 14.5% households the hand pumps are not functioning properly and according to 23.28% households the hand pumps are not at all functioning.

Frequent non-functioning of source of water

1.9% households were of the opinion that the hand pumps stops functioning once in a fortnight, 3.43% households were of the opinion that it stops functioning once in a month. 3.81% households were of the opinion that it stops functioning once in 2 months, 16.79% households were of the opinion that it stops functioning once in 3 months, 24.42% households were of the opinion that it stops functioning once in a year & 3.43% households were of the opinion that it stops functioning once in 2 years. (Refer Table No. 3.79 also).

TABLE NO. 3.79

FREQUENCY OF THE SOURCE GOING OUT OF ORDER

<u>FREQUENCY</u>	<u>NO. OF HOUSEHOLDS</u>
Once in a fortnight	5
Once a month	9
Once in 2 months	10
Once in a quarter	44
Once in a year	64
Once in 2 years	9

Reasons for non-functioning of the source of water

According to 22.51% households it is because of improper use, 11.45% households it is because of faulty installation, 11.06% households were of the opinion that it is because of the installation of substandard equipments, according to 9.16% households it is because of natural calamities, according to and according 1.14% households it is because of theft of parts (Refer Table No. 3.80 also)

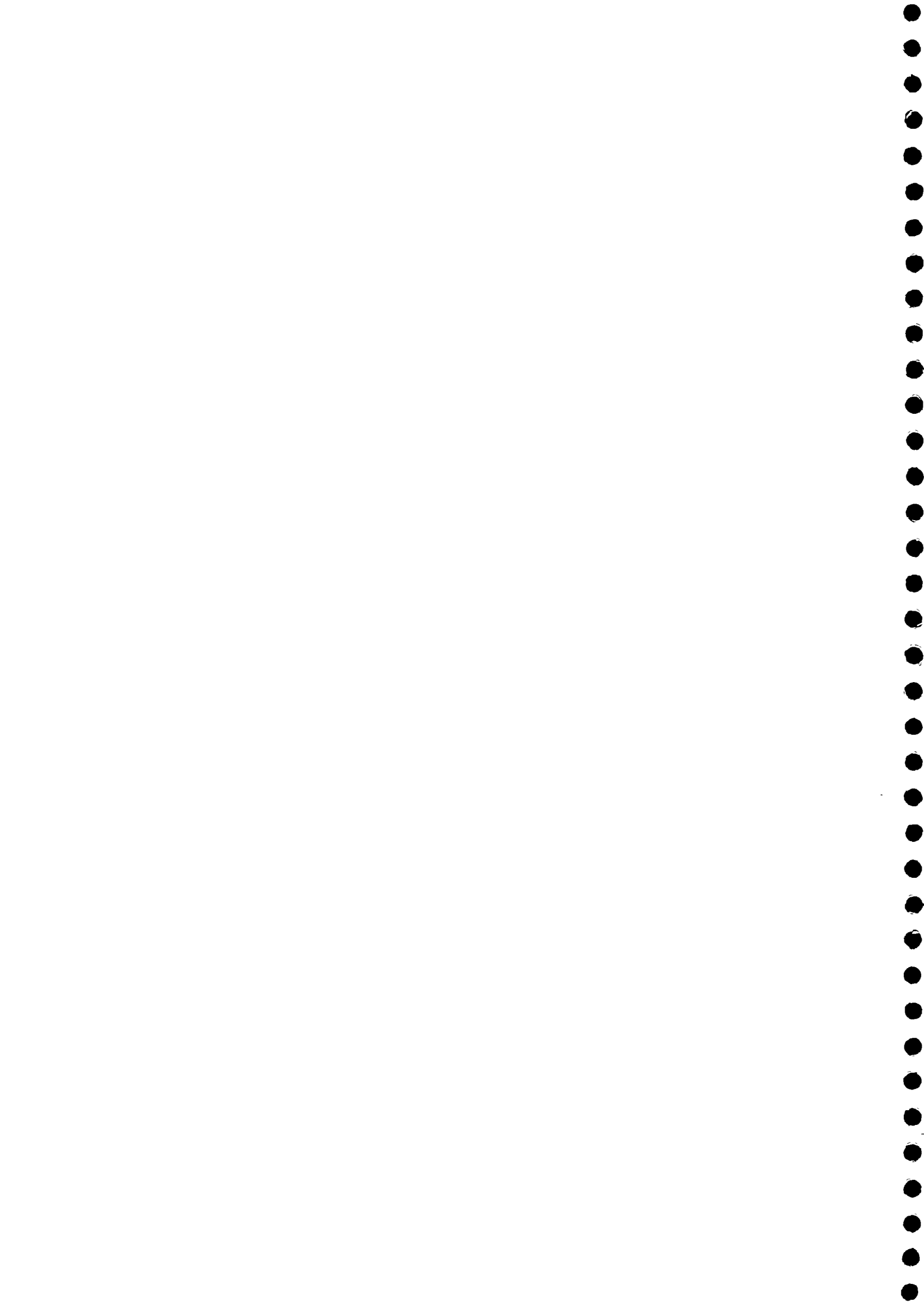


TABLE NO. 3.80

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO REASONS REPORTED  
FOR THE WATER SOURCE GOING OUT OF ORDER

<u>REASONS</u>	<u>NO. OF HOUSEHOLDS</u>
Improper use	59
Faulty installation	30
Substandard equipment	29
Damage due to natural calamities	24
Theft of parts	3

Cost for proper and regular water supply

Villager's views were elicited about whom should meet the cost of the installation and maintenance for proper and regular water supply. According to 100% households government should meet the cost of installation of water source, according to 1.04% households panchayat should meet the cost, according to 0.38% households NGO should meet the cost all to 12.97% panchayat aid government jointly should meet it, according to 17.93% households self/community should meet the cost and according to 1.9% PHED should meet the cost of O & M for proper and regular water supply. (Refer Table No. 3.81 also).

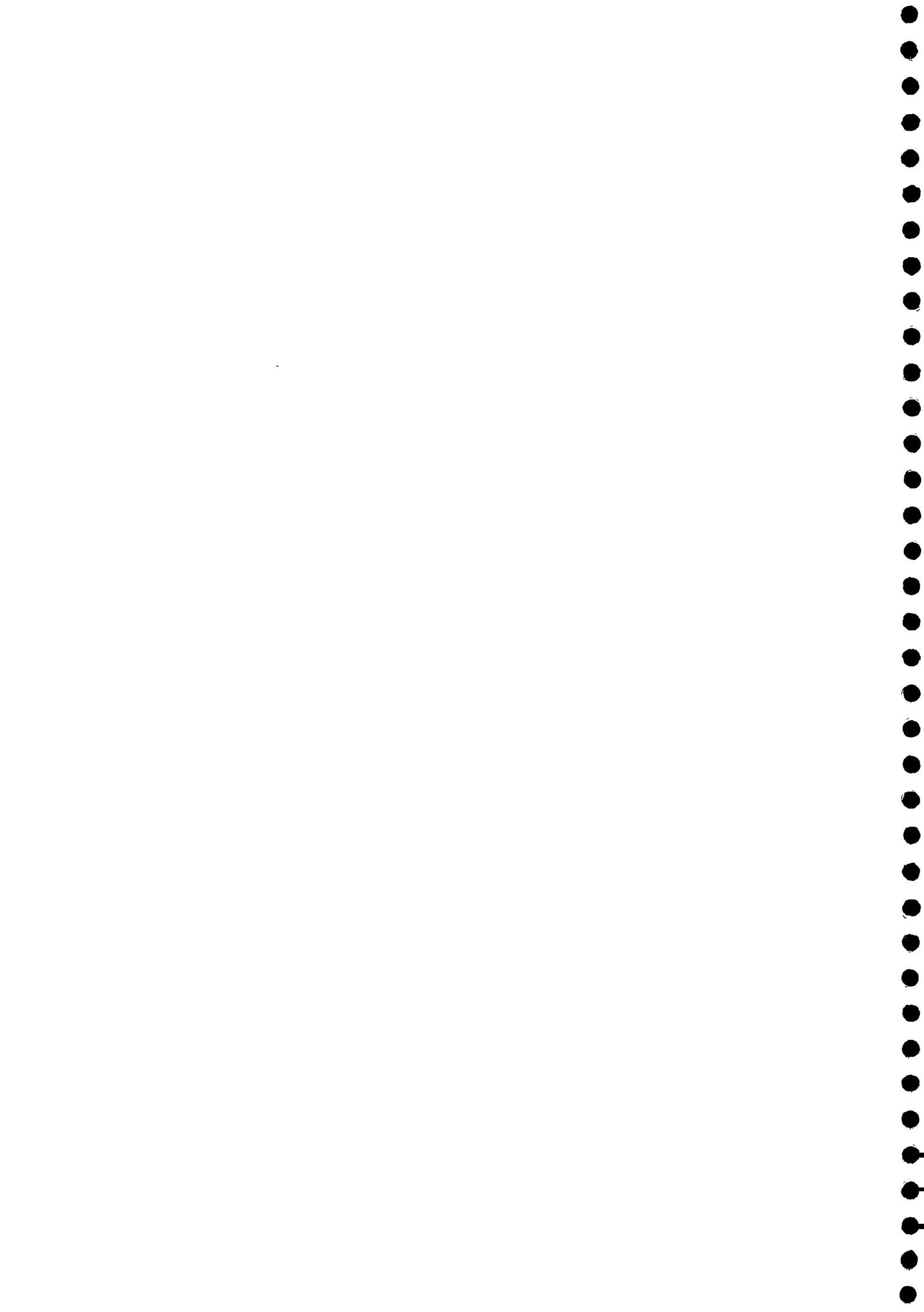
TABLE NO. 3.81

OPINION ABOUT THE PERSON WHOM SHOULD  
MEET THE COST OF WATER SUPPLY

	<u>INSTALLATION</u>	<u>MAINTENANCE</u>
Government	262	167
Panchayat	-	-
Government & Panchayat jointly	-	34
Self/Community	-	47
PHED	-	-

Extent and sharing pattern of the cost of installation / O & M

Villager's opinion were asked about the extent and sharing pattern of the cost of installation or operation and maintenance. According to 58.01% households there should be equal share per



household, according to 24.42% households it should be proportionate to number of family members and according to 1.78% households it should be proportionate to actual water consumption.

80.91% households were of the opinion that the amount should be less than Rs. 20/-, 1.9% were of the opinion that it should be in between Rs. 21-40/- & 0.37% were of the opinion that it should be in between Rs. 41-60/-.

#### Contribution for water source

It is reported that 8.39% households have contributed some amount and 91.6% households have not made any financial contribution for the implementation of water source.

Out of the 8.39% households who have contributed some amount, it is reported that 9.09% households have contributed an amount below Rs. 100/- & 90.9% households have contributed Rs.101-300.

#### Status of Hygienic Conditions around Water source

13.35% households have reported that hygienic condition is not maintained around the water source and 86.64% households have reported that hygienic condition is maintained around the water source.

Out of the 13.35% households who felt that hygienic condition is not maintained around the water source, 60% households felt that it is because there was no proper drainage system, 8.57% households felt that it is because the location was not proper & 34.28% households felt that it is because necessary repairs are not done.

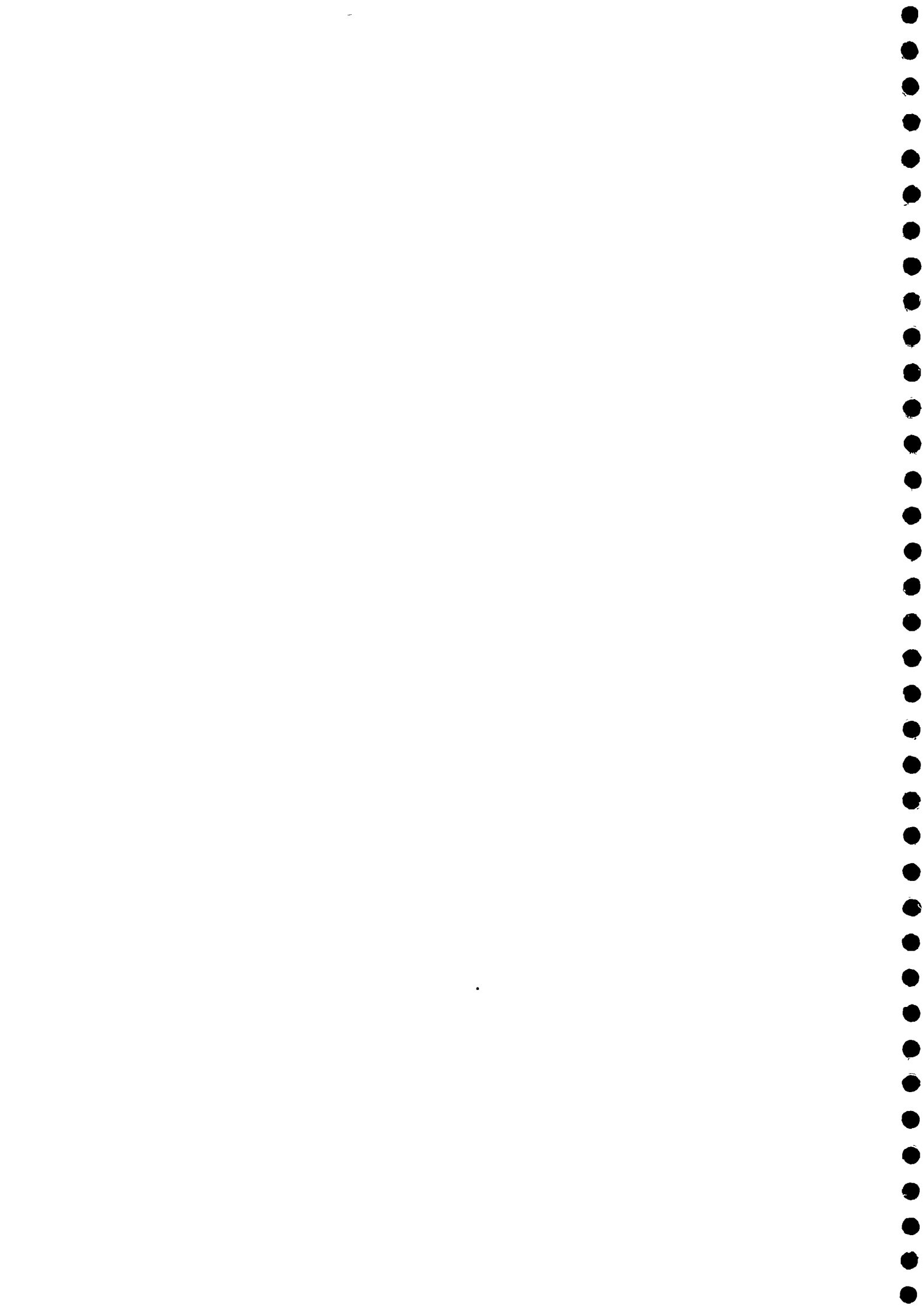
#### Quality of the water supply

Villagers were asked about the quality of water available for cooking and drinking. But they were unable to express whether they are getting hygienic or unhygienic water. Because of the lack of awareness they were unable to differentiate the quality of water. They use all types of water for cooking and drinking without checking its quality. Thus 96.94% households were of the opinion that the water supplied is fit for drinking while 3.05% households were of the opinion that it is not fit for drinking

Around 99% households have reported that there is no facility of checking drinking water in their village nor near by their village.

#### Testing drinking water or pollution check

98.85% households have reported that there is timely no checking of drinking water in their village.



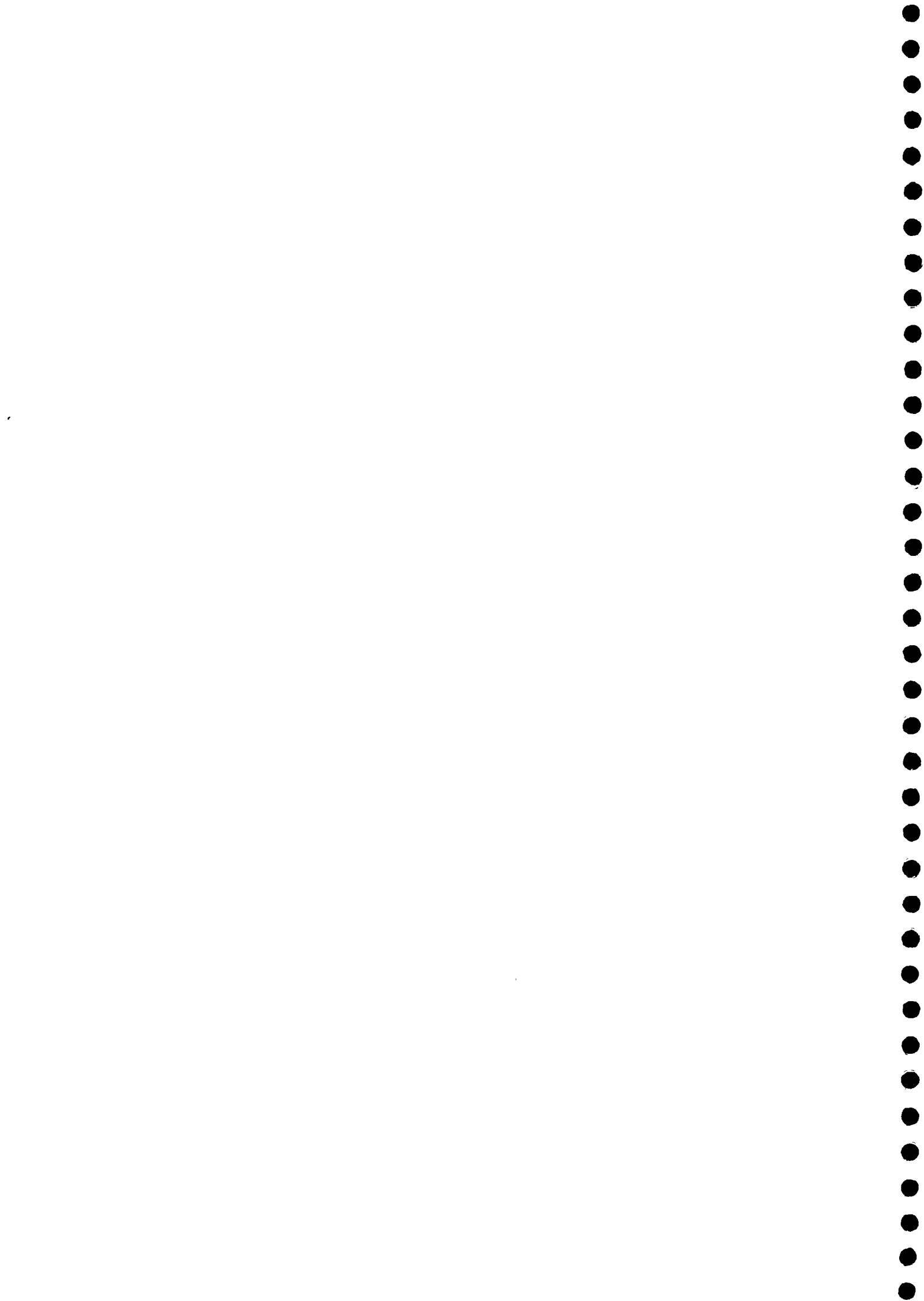
Water borne diseases after rural water supply programme

The occurrence of water borne diseases like diarrhoea decreased according to 30.53% households, and not changed according to 24.42% households. The occurrence of cholera decreased according to 48.09% households and not changed according to 0.78% households. The occurrence of typhoid decreased according to 26.71% households and not changed according to 1.9% households. The occurrence of malaria decreased according to 26.33% households, increased according to 1.9% households and not changed according to 25.57% households, skin diseases decreased according to 0.78% households and other diseases also decreased according to 4.19% households. (Refer Table No. 3.82 also).

TABLE NO. 3.82

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO OCCURRENCE  
OF WATER BORNE DISEASES

<u>DISEASES</u>	<u>DECREASED</u>	<u>NO CHANGE</u>	<u>INCREASED</u>
Diarrhoea	80	64	-
Cholera	126	8	2
Typhoid	70	5	-
Malaria	69	67	5
Skin infection	2	-	-
Rest	11	-	-



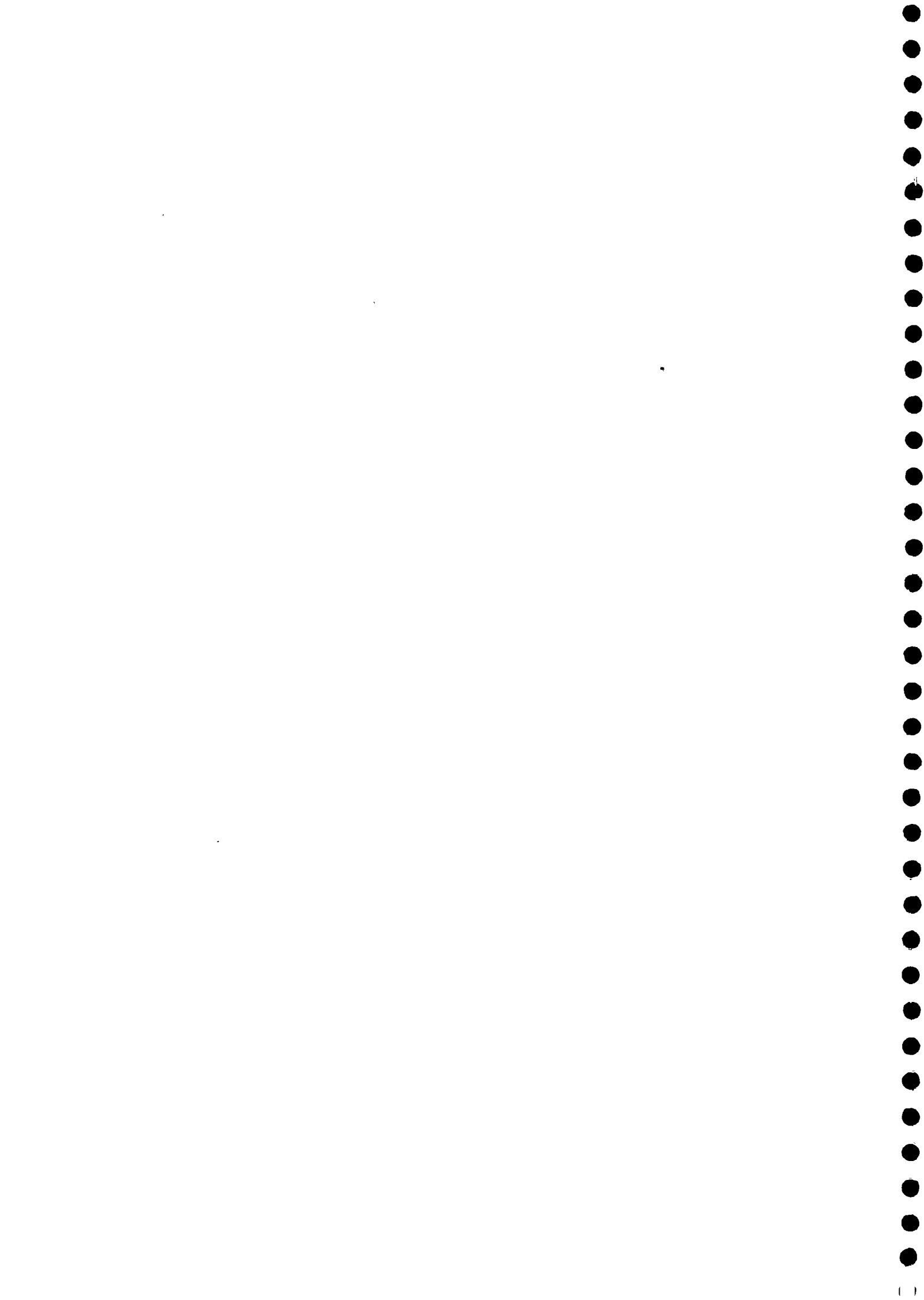


CONCLUSIONS

The conclusions of this study in the state of Bihar are being drawn based on the data collected and are as follows :

\* As regards the present coverage status of rural water supply and sanitation it has been found that :

- Most of the villagers are facing problems in getting clean and good drinking water even after the implementation of rural water supply programme.
- The present coverage status of the rural water supply is satisfactory only to some extent as in some of the villages which are reported as FC as per the records, none of the tube wells is working and thus the villagers are still dependent on other sources for getting drinking water.
- Initially one tube well was designed / sanctioned per population of about 250 persons; in some cases wherein the population of the village was between 250-499 or 500-749, etc. then obviously these villages had only one or two tubewells respectively and if something went wrong with these one or two tube wells then the villagers were practically left without any clean, reliable source of drinking water. One such example is the Khatko village (Bharno block in Gumla district) where not even a single tubewell was functioning during the visit of our field staff and people were using the water from the community well and other sources even for cooking and drinking which is too unhygienic.
- In Samastipur, it is reported that there are a large number of own tube wells and since the level of water is also high, there is comparatively less problem in getting water eventhough some of the government tube wells are malfunctioning. But still in some Harijan hamlets & backward areas of Samastipur district people are facing problems because there are only a few nos. of tube wells sanctioned by the government and since these backward people cannot afford to have their own tube wells hence they are dependent only on the government or natural sources.
- None of the tube wells were functional in some villages of Gaya which were recorded as FC in government records, mainly in backward class areas.
- It is also informed by the villagers that the tube wells sanctioned by the government to a particular area will be

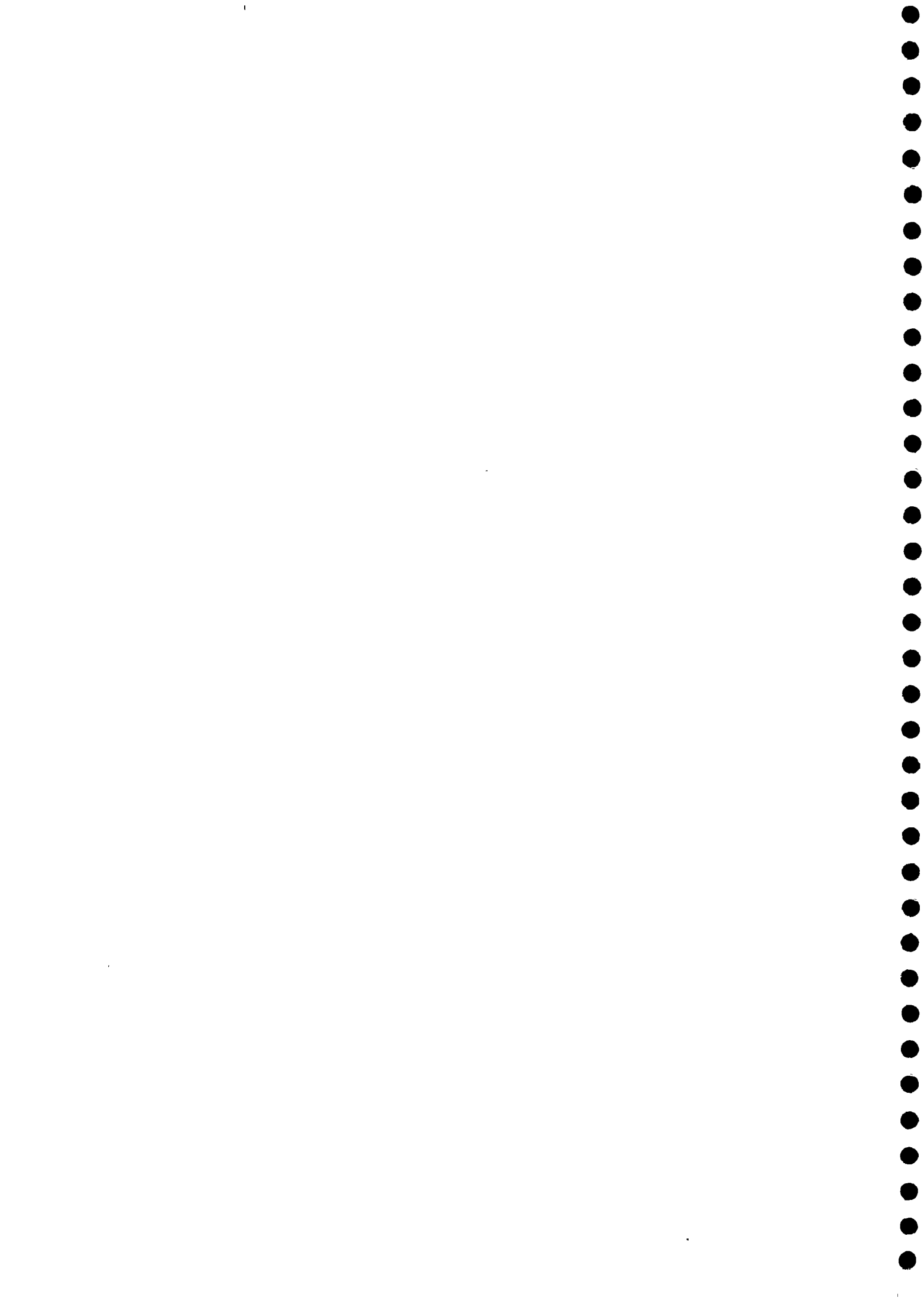


installed near the residence of powerful/influential persons and the actual place for which it is sanctioned will be somewhere else according to the records kept in the departments. Thus the tube well is treated as a personal property and the other villagers are not permitted to use this tube well for their requirements.

- The data collected pertaining to the coverage status of the villages is shown in Annexure - I. From this it is seen that all the five villages in the block Dalsinghsarai of Samastipur district were partially covered in 1994. Out of these 4 of them have changed to FC in 1995 and one in 1998. There are 189 tubewells in the block as on 01/04/1998 as reported by the block officials. One village in Rosera block was changed to PC from FC in 1997. Out of the rest 4 villages except one FC village, all others were PC in 96-97. In Singhia block two villages have moved to PC from FC, one has moved to FC from PC, other two villages were FC in 96-97. Four villages in Dumka have moved to FC status from PC in 96-97 except one which continues as PC.
- In Gaya and Gumla all the selected villages were FC. In Dumka one village has moved from NC status to PC, one has moved back from FC to PC and one PC village has changed to FC also. All others were FC villages.
- Many of the villagers are unaware of the concept of sanitation. There is no proper toilets in most of the villages. More than 90% villagers are using open fields and river banks for defecation. There is no provision of public toilets. Only a very few families have their own toilets.

\* As regards the safe water supply coverage the conclusions are as follows :

- Since majority of the villagers are unaware of the concept of hygiene and safe water so they were unable to express clearly whether the water they use is good or not. For them water which seems to be relatively clean is also good water.
- In spite of this about 16.39% households have categorically reported that hygienic conditions are not maintained around the water source.
- Out of the 16.39% households who felt that hygienic condition is not maintained around the water source, 59.3% households felt that it is because of the absence of proper drainage system, 34.88% households felt that it is because necessary repairs are not done, 11.04% households felt that it is because cleanliness is not maintained properly, 6.97% households felt that it is because the location is not proper & 5.81% households

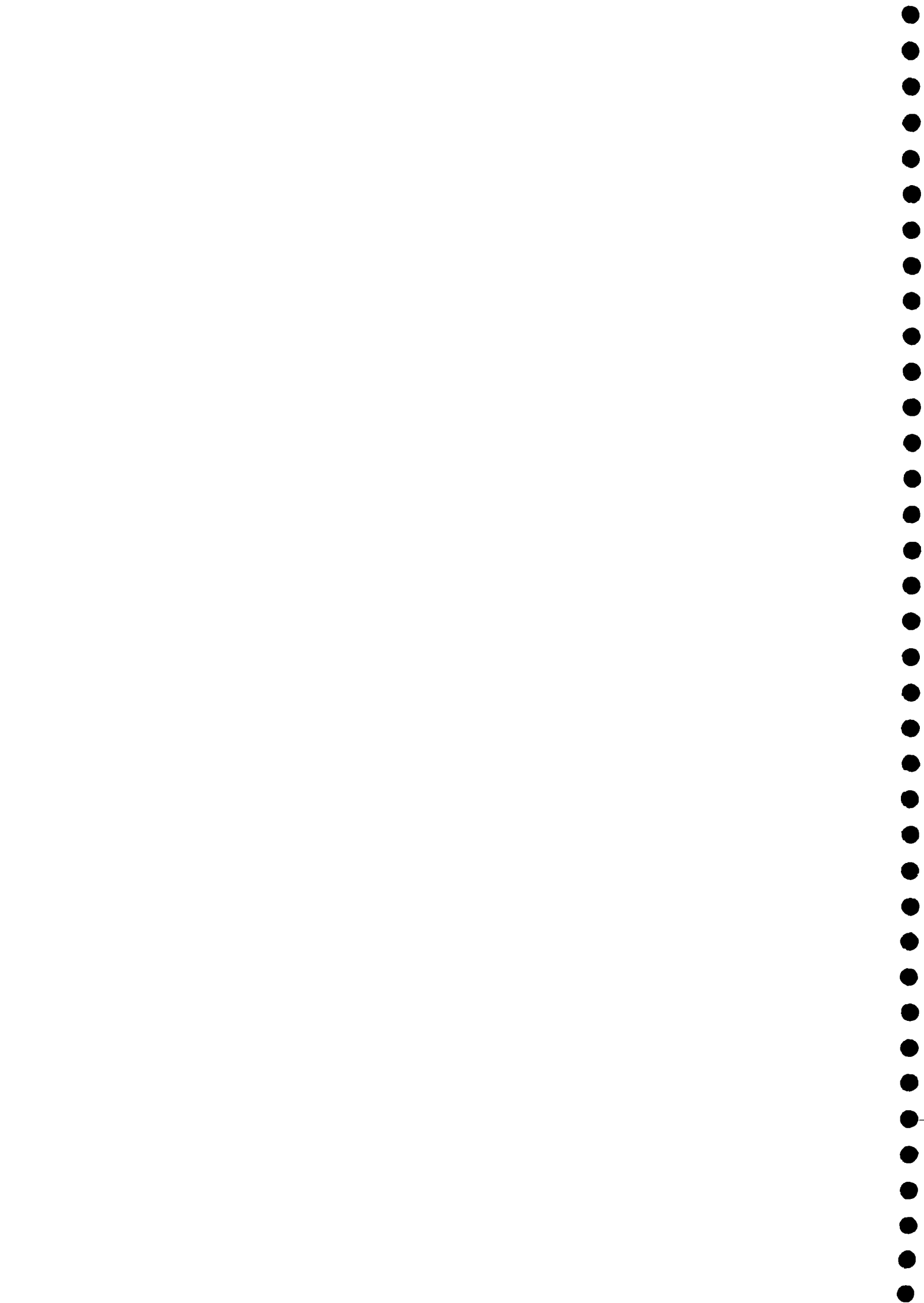


felt that it is because of some other reasons.

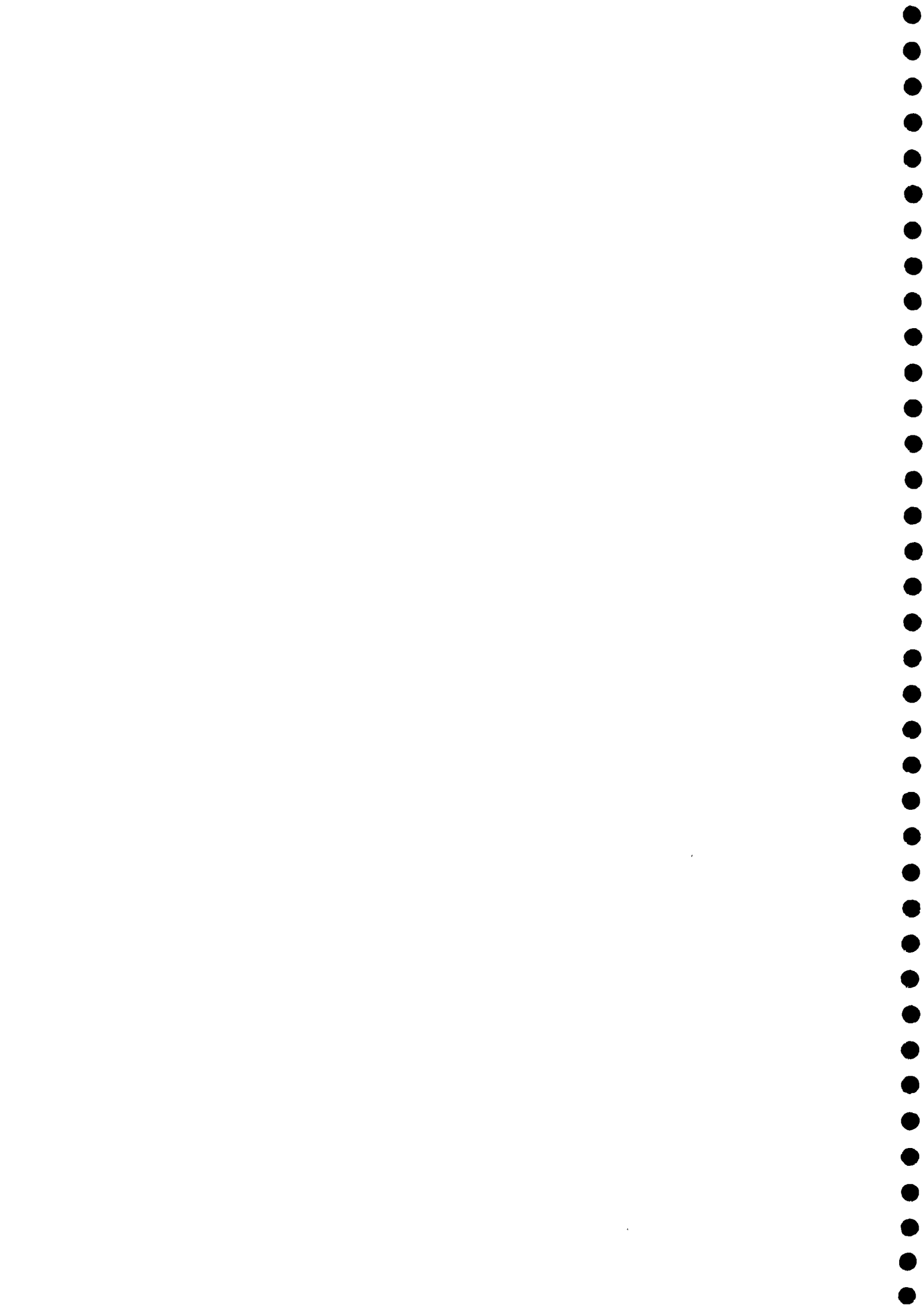
- Same is also true with the quality of the water available for cooking and drinking and the villagers were generally unable to give a clear view. Infact they use all types of water for cooking and drinking without checking its quality.
- Around 98.66% households have reported that there is no regular checking / testing of drinking water, out of this 20.67% households felt that it is because checking is not done in time, 79.03% households felt that there is no facility for checking/testing drinking water, 3.18% felt that no one ensures whether clean water is coming through water sources or not, 0.09% households felt that there is leakage in pipe lines and 0.28% households felt that cleanliness is not maintained around the water source.
- The occurrence of water borne diseases like diarrhoea decreased according to 32.12% households and is still more or less the same as before the programme according to 14.87% households. The occurrence of cholera decreased according to 44.51% households, the occurrence of typhoid decreased according to 25.73% households, the occurrence of malaria decreased according to 28.02% households, and has not changed according to 18.39% households, etc., while about 6% have reported an increase also

\* As regards the Operation and maintenance status of water supply sources the following are the conclusions :

- 39.44% households have reported that it stops functioning once in 3 months or less, while 25.26% households have reported that it stops functioning once in a year
- According to 21.35% households the non-functioning of the source of water is because of improper use, according to 18.68% households it is because of the installation of substandard equipments, according to 9.05% households it is because of faulty installation, while remaining gave some other reasons.
- About 39.65% households were not satisfied with the present system of operation and maintenance
- Out of the 39.65% households who were not satisfied, 66.35% have reported that adequate funds were not available, 10.1% have reported that trained manpower is absent, 7.45% have reported that the responsibility for O & M is not fixed, 5.05% have reported that people did not pay their fixed share, etc.
- It is reported by 46.52% households that for the operation and maintenance of water source community is









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**NEW DELHI**

sources it is reported that only 16.11% families have contributed some amount for the implementation of water source. Out of the few families who have contributed some amount to the water sources, majority of them have contributed an amount in between Rs. 301/- to Rs. 500/- and a few have contributed an amount more than Rs.1000/-.

- As regards the agency which <sup>is really to be met</sup> should meet the cost for proper and regular water supply, 96.09% households reported that government ~~should~~ meet the cost, according to 1.04% households panchayat ~~should~~ meet the cost, according to 0.09% households NGO ~~should~~ meet the cost or panchayat and government jointly ~~should~~ meet it, according to 0.66% households self/community should meet the cost and according to 0.57% PHED should meet the cost for proper and regular water supply.
- As regards the extent and sharing pattern of the cost of installation 58.91% households felt that there should be equal share per household, according to 25.07% households it should be proportionate to the number of family members and according to 2% households it should be proportionate to actual water consumption.
- Regarding the amount of contribution for O & M, 79.88% households were of the opinion that the amount should be less than Rs. 20/-, 3.81% were of the opinion that it should be in between Rs. 21- Rs.40/-, 0.85% were of the opinion that it should be in between Rs. 41- Rs.60/-, 0.66% were of the opinion that it should be in between Rs. 81- Rs.100/- and according to 0.47% households it should be less than Rs. 100/-.

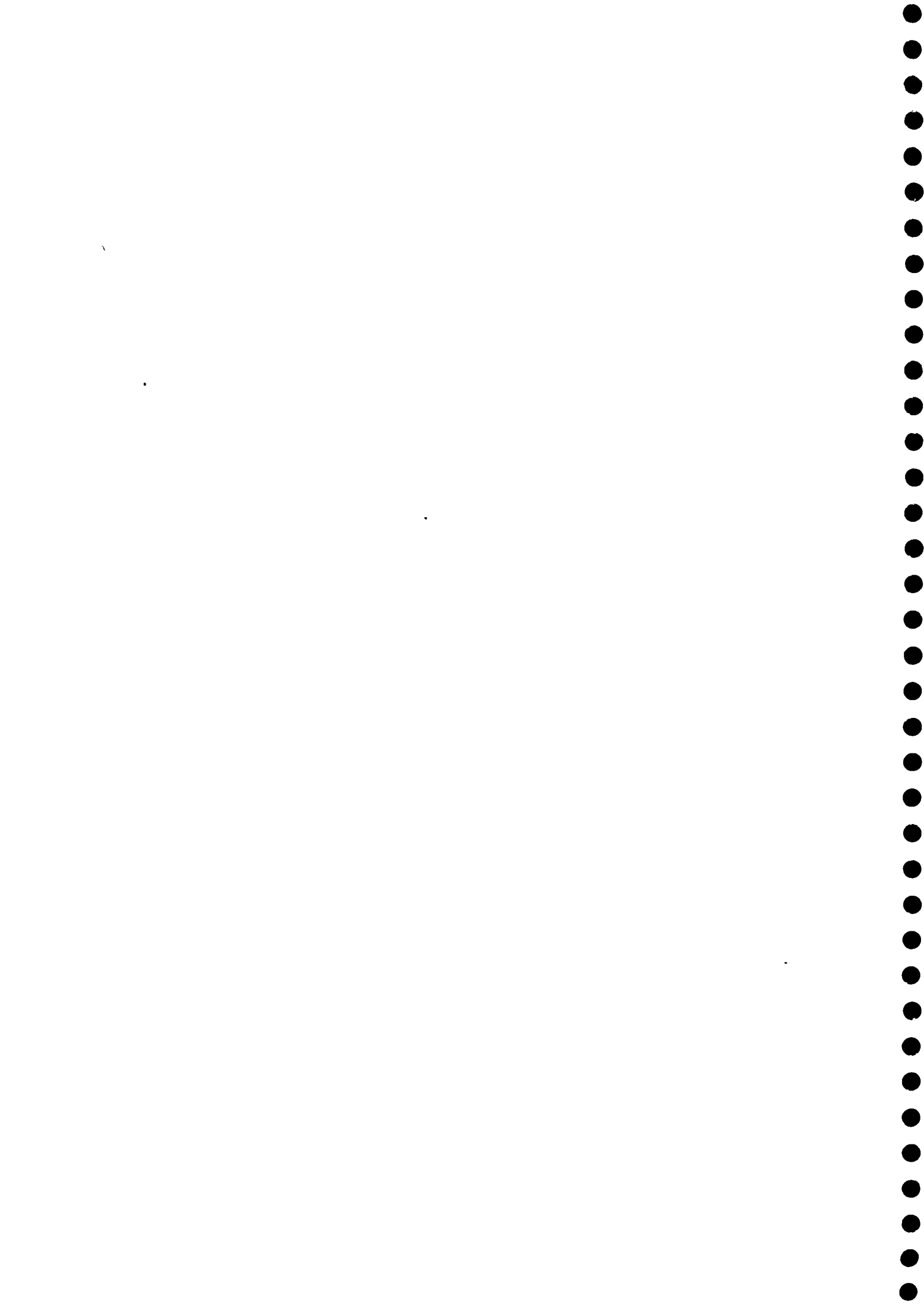
\* As regards the current knowledge and practice of villagers on water supply the conclusions are as follows :

- Majority of the villagers are not aware of Rajiv Gandhi national drinking water mission, but they knew that it is a government tube well.
- All the tube wells functioning in different areas of Bihar were not sanctioned under Rajiv Gandhi national drinking water mission. There are tube wells sanctioned by Bihar state government, tube wells sanctioned under M.P quota, through JRY & through World Bank.
- Many villagers are not aware of the concept of hygiene/safe water. Also they are unaware of the water borne diseases and problems due to the drinking of unhygienic water. They are using well/pond/river water for cooking and drinking purpose villagers are not aware of Rajiv Gandhi national drinking water mission, but they knew that it is a government tube well/pond/river water for the cooking and drinking purpose.



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- \* As regards the involvement of the community in planning and implementation of the water supply programme, the survey findings reveal that it is seldom done.



H.F. Sub division Rosera

Under

ANNEXURE I  
Rosera Taluk

Required report.

Sl. No.	Name of village	Code No	Population 1991	1993-94		1994-95		1995-96		1996-97	
				T/well	Pc/Fc	T/well	Pc/Fc	T/well	Pc/Fc	T/well	Pc/Fc
1	Ghalpur	95	193	5 No	Fc	-	-	-	-	5 No	Pc
2	Noharwari	94	4769	41 No	Pc	-	-	5 No	-	46 No	Pc
3	Haripur	64	3933	22 No	Fc	-	-	2 No	-	24 No	Pc
4	Pachgarwa	63	3871	23 No	Pc	-	-	3 No	-	26 No	Pc
5	Pawra	67	1665	15 No	Pc	-	-	1 No	-	16 No	Pc
6	Rasalpur Sharha	68	3060	33 No	Fc	-	-	-	-	33 No	Pc
7	Mahindernagar (Maha)	69	12239	105 No	Pc	-	-	2 No	-	107 No	Pc
8	Khaira	77	1683	14 No	Fc	-	-	-	-	14 No	Pc
9	Bataha	78	1267	8 No	Pc	-	-	1 No	-	9 No	Pc

H.F.  
18.7.98  
J.G.

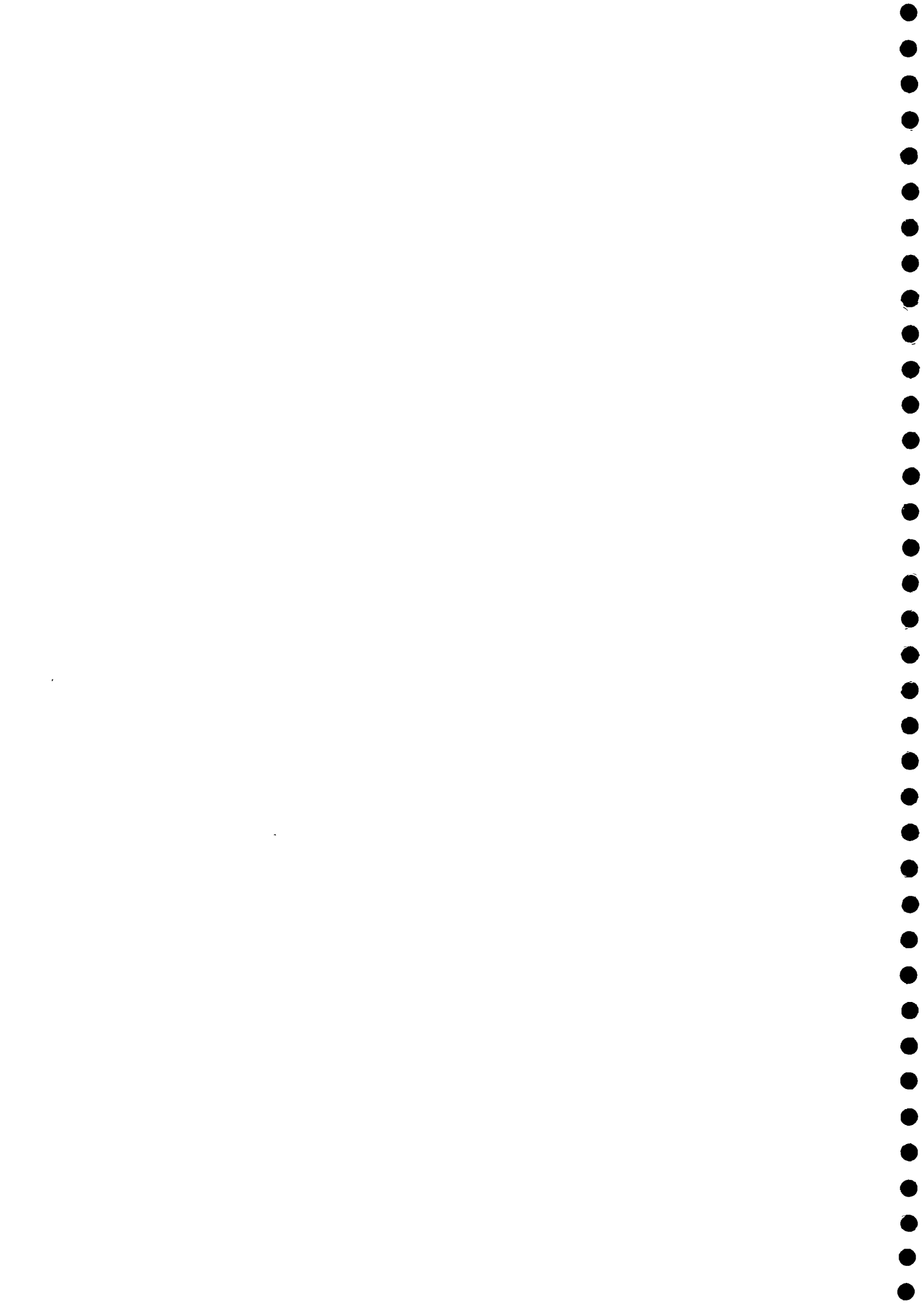
21/7/98  
अवर प्रमंडल प्रवाधिकारी  
लोक सवा. धर प्रमंडल  
रोसरा



P. H. Sub division Resera under Singhia Block - Required report

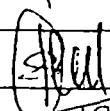
Sl. No.	Name of Village	Code No	Population 1991	1993-94		1994-95		1995-96		1996-97	
				T/well	Pc/Fc	T/well	Pc/Fc	T/well	Pc/Fc	T/well	Pc/Fc
1	Lagana ✓	149	3200	67 No	Pc	1 No	-	-	-	68 No	Pc
2	Bhitar	148	1370	16 No	Pc	-	-	-	-	16 No	Pc
3	Agarwal ✓	147	1624	7 No	Pc	-	-	-	-	11 No	Pc
4	Shalepur ✓	146	4408	65 No	Pc	-	-	2 No	-	67 No	Pc
5	Karahi	145	2803	32 No	Pc	-	-	-	-	32 No	Pc
6	Azha ✓	144	3742	44 No	Pc	-	-	2 No	-	47 No	Pc
7	Jahangirpur ✓	92	3151	25 No	Pc	-	-	1 No	-	29 No	Pc
8	Manuspur	174	2233	11 No	Pc	5 No	-	-	-	20 No	Pc
9	Asahi	175	903	7 No	Pc	-	-	-	-	12 No	Pc

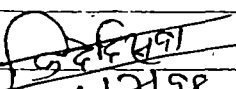
27/7/98  
 16.7.98  
 अवसर प्रमंडल पदाधिकारी  
 लोक स्टा. भवर प्रमंडल  
 रोवड़ा

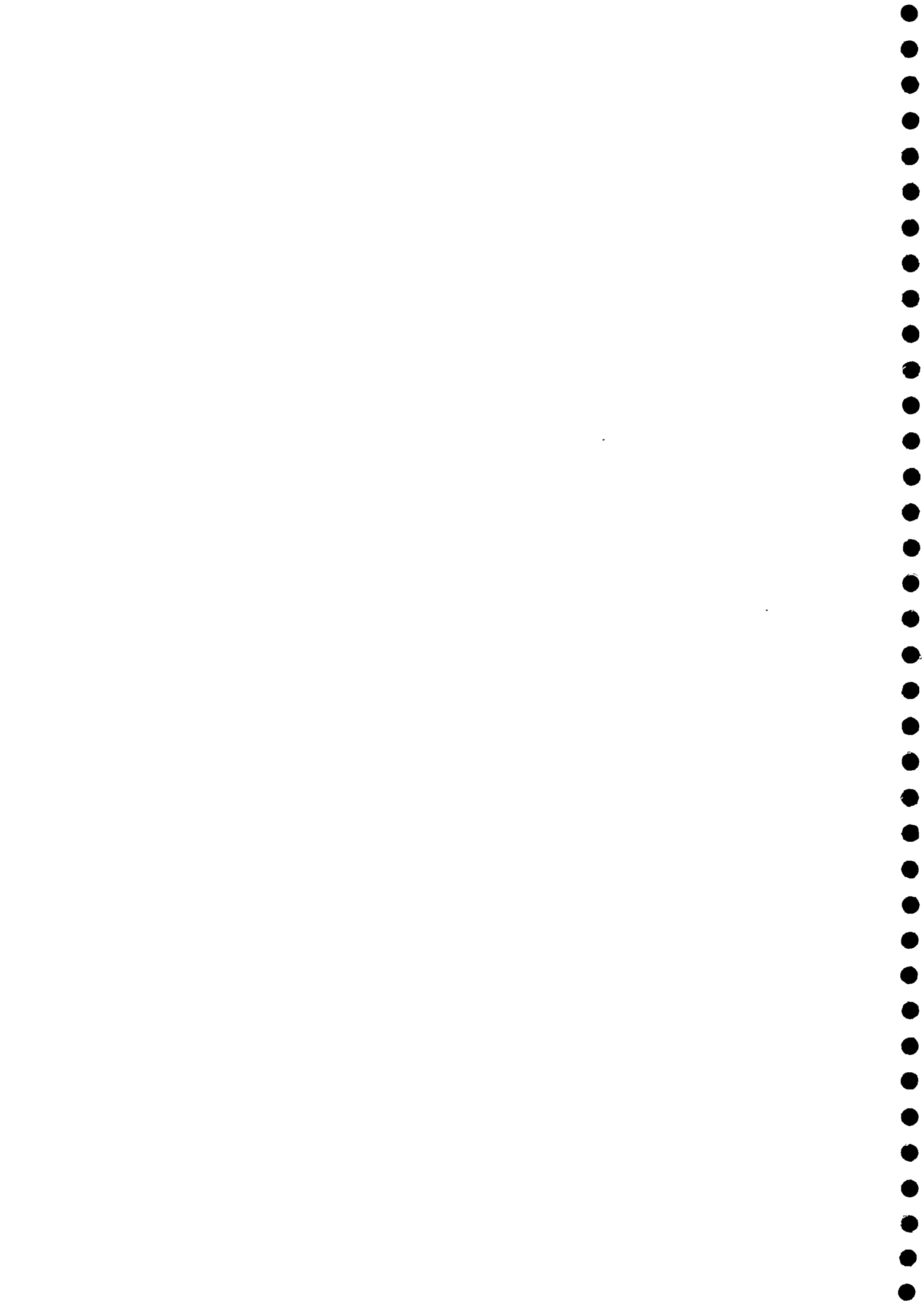




Sl. No.	Village Code	Name of Village	Status of village NC/PC/FC					Total Nos of TN 52	Remarks
			on 1-4-94	on 1-4-95	on 1-4-96	on 1-4-97	on 1-4-98		
1.	2.	3	4	5	6.	7	8	9	10
1	54	Panr.	PC	FC	FC	FC	PC	68	villages have been converted
2.	55	Chakbhadra	PC	FC	FC	FC	FC	19	from the Govt.
3	56.	Mathura Pur	PC	FC	FC	FC	FC	30	in muni & A.P.
4	57	Harishankarpur	PC	PC	PC	PC	FC	15	
5.	59	Pagra	PC	FC	FC	FC	FC	57	
6.	69.	Shahbaspur Mahogay	PC	FC	FC	FC	FC	14	
7.	80.	Nawada	PC	FC	FC	FC	FC	32	
8.	102	Maniyarpur	PC	FC	FC	FC	FC	34	
9	106	Rahimpur Beare	PC	FC	FC	FC	FC	9	

  
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 SCD/Salar

  
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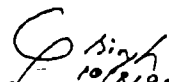


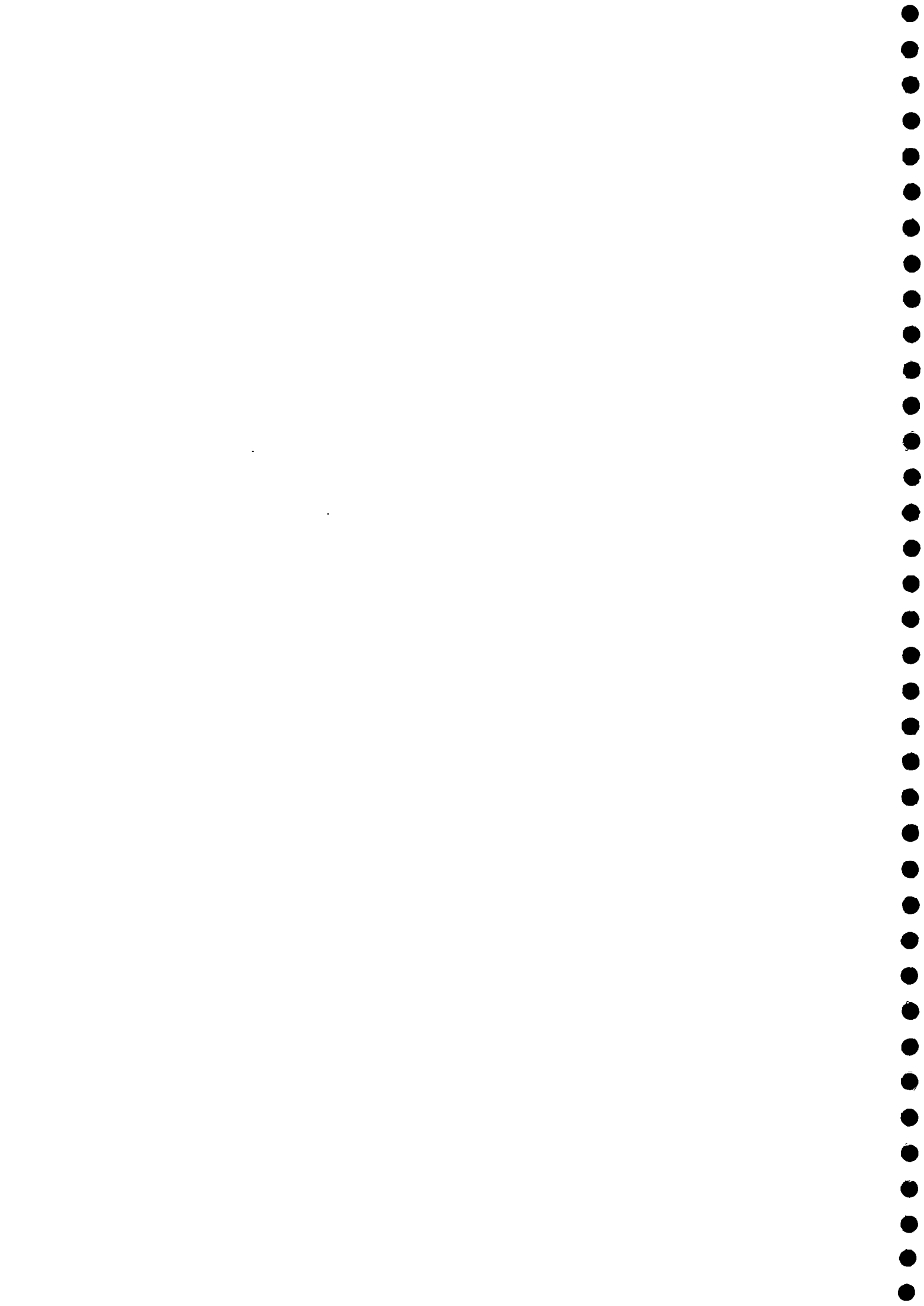
# Block Bodh Gaya Bihar

## ANNEXURE I

S.No.	Village	Code	Number Table	Population	94-95	95-96	96-97	Remarks
1.	Motichak	17	5	412	FC	FC	FC	
2.	Inguna	61	8	413	FC	FC	FC	
3.	Mayhauh	101	7	414	FC	FC	FC	
4.	Sekhwarra	15	6	419	FC	FC	FC	
5.	Turikhura	62	9	423	FC	FC	FC	
6.	Kharaura	63	3	397	FC	FC	FC	
7.	Dadbur	67	2	398	FC	FC	FC	
8.	Dhamawari	91	3	389	FC	FC	FC	
9.	Mora Mardona	84	6	411	FC	FC	FC	
10.	Bara	33	5	416	FC	FC	FC	

ANNEXURE I

  
 P. Singh  
 10/8/98  
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Block Wazirganj, Bihar

ANNEXURE III

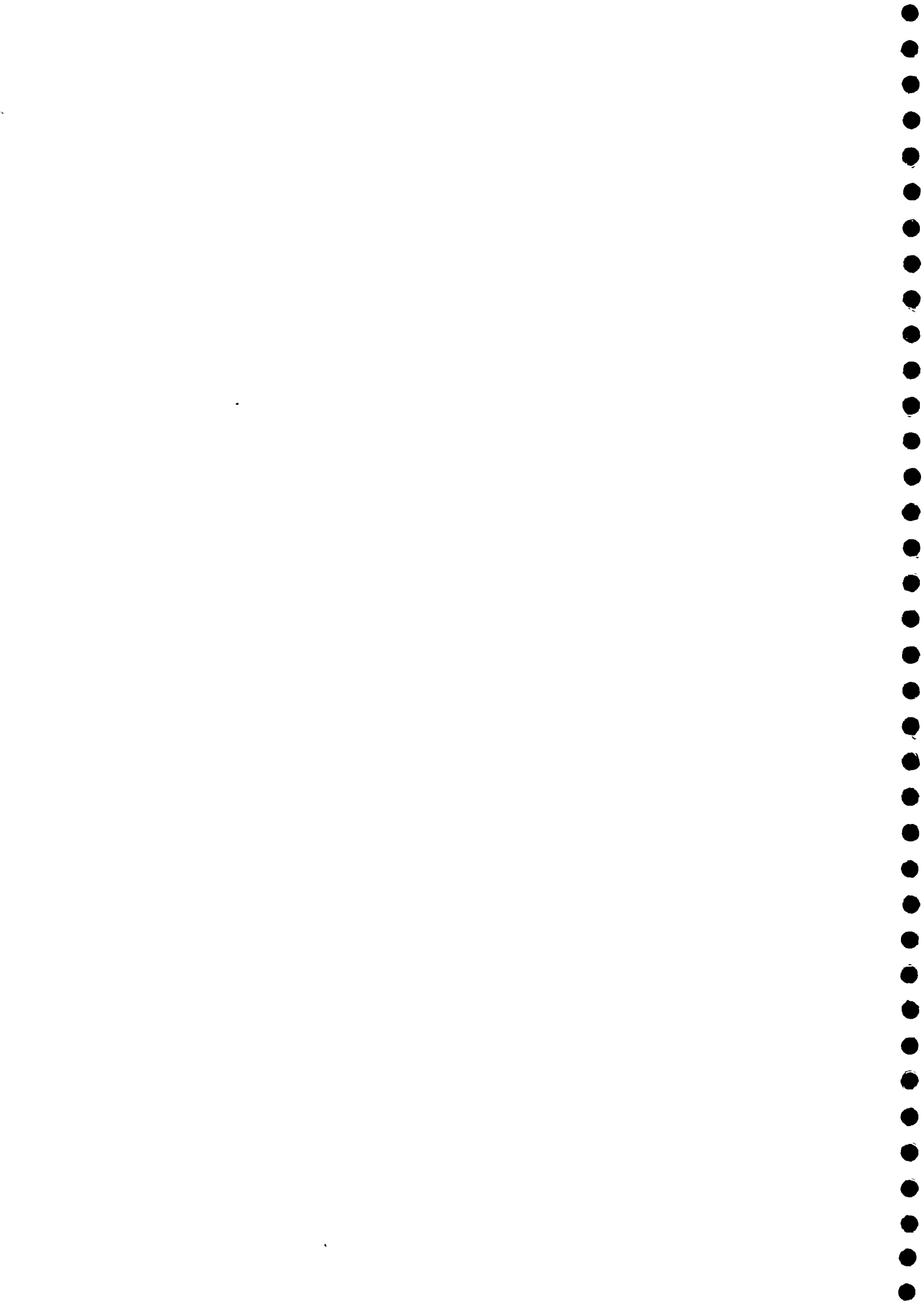
S.No	Village	Code	Number Teable	Population	94-95	95-96	96-97	Remarks
1.	Dakhingamua ✓	609	26.	3775	FL	FL	FL	
2.	Khisiawan ✓	616	12	1568	FL	FL	FL	
3.	EKU ✓	617	11	1095	FL	FL	FL	
4.	Sahiya ✓	618	13	2801	FL	FL	FL	
5.	Purnawan ✓	628	17	4160	FL	FL	FL	
6.	Usri	629	04	336	FL	FL	FL	
7.	Sowa	630	10	1322	FL	FL	FL	
8.	Bhura	632	09	803	FL	FL	FL	
9.	Bhate	610	14.	3048	FL	FL	FL	

ANNEXURE I

C. Singh  
10/8/98

144 1444 1444 1444

144 144 1444 144



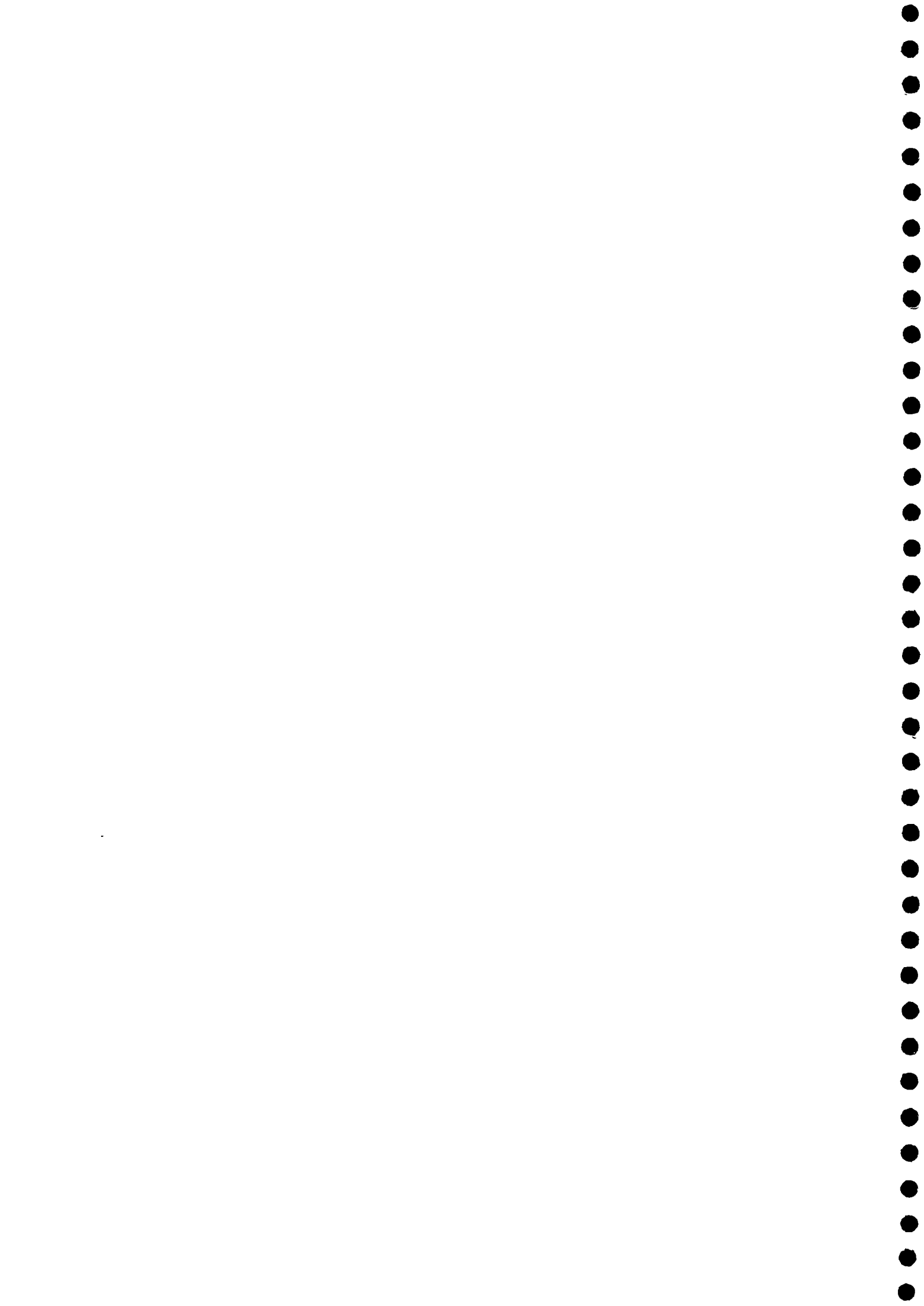
Block Pasaiya "Bihar"

ANNEXURE I

S-No	Village	Code	Number Teuble	Population	94-95	95-96	96-97	Remarks
1.	Konchi ✓	22	14	3527	FC	FC	FC	
2.	Bahera ✓	08	09	931	FC	FC	FC	
3.	Rukunpur	12	08	829	FC	FC	FC	
4.	Gilosi ✓	21	11	2992	FC	FC	FC	
5.	Biso	17	06	490	FC	FC	FC	
6.	Bustpariya ✓	18	10	996	FC	FC	FC	
7.	Khaira	123	10	949	FC	FC	FC	
8.	Gusariy	15	12	2031	FC	FC	FC	
9.	Baswan ✓	23	11	1495	FC	FC	FC	

ANNEXURE I

Chinyh  
10/01/98  
T.A.  
10/01/98





District: - Dumka.

State - Bihar

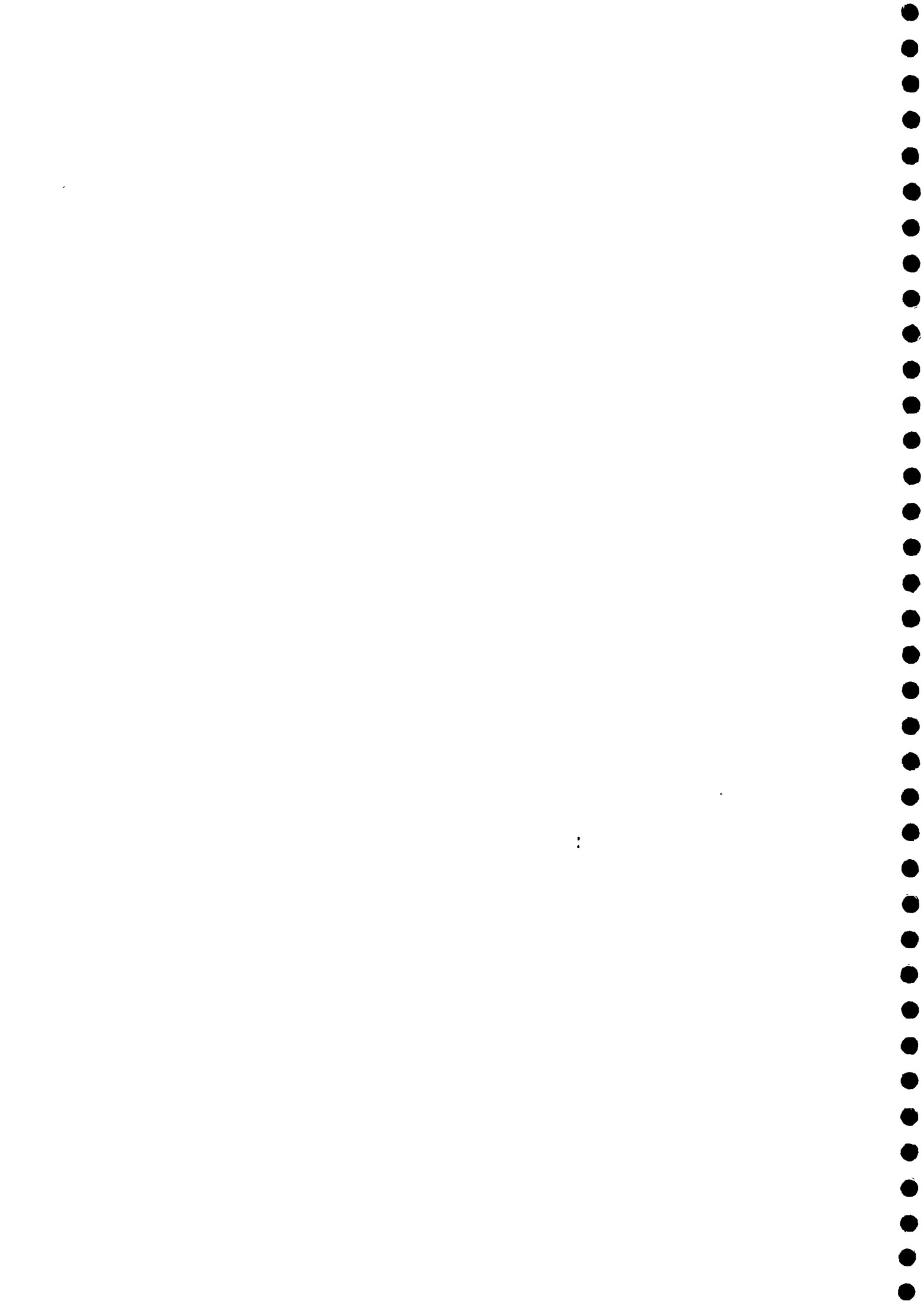
Block - ~~Mata~~ / Kundhit.

Sl. No.	Name of Village	Code No.	Population	1996-95			1995-96			1994-97			1993-98			Remarks
				No. of T/W up to date	Population	Status	No. of T/W up to date	Population	Status	No. of T/W up to date	Population	Status	No. of T/W up to date	Population	Status	
1.	Dumona	3	412	7	437	FC	7	495	FC	7	453	FC	8	461	FC	
2.	Lakhiyabad	10	132	2	140	FC	2	143	FC	2	145	FC	2	148	FC	
3.	Dudani	39	345	9	366	FC	9	373	FC	9	381	FC	9	389	FC	
4.	Deuli	29	358	7	380	FC	7	388	FC	7	396	FC	7	404	FC	
5.	Kundhit	42	1990	33	2109	FC	33	2152	FC	36	2194	FC	42	2239	FC	
6.	Kalipather	9	560	11	594	FC	11	606	FC	11	618	FC	11	623	FC	
7.	Patharabad	13	190	3	202	FC	3	206	FC	3	210	FC	3	214	FC	
8.	Chandpur	16	698	6	740	FC	6	755	FC	6	770	FC	8	786	FC	
9.	Kathi Jorija	44	495	9	525	FC	9	536	FC	9	547	FC	9	558	FC	

ANNEXURE I

*Beeles*  
4/8/98  
S.E. Kunaljit

अधीक्षक एम.एस.डी.ओ.  
डी.ए. कार्यालय  
बाराबादी, दुमका



ANNEXURE I

State :- Bihar

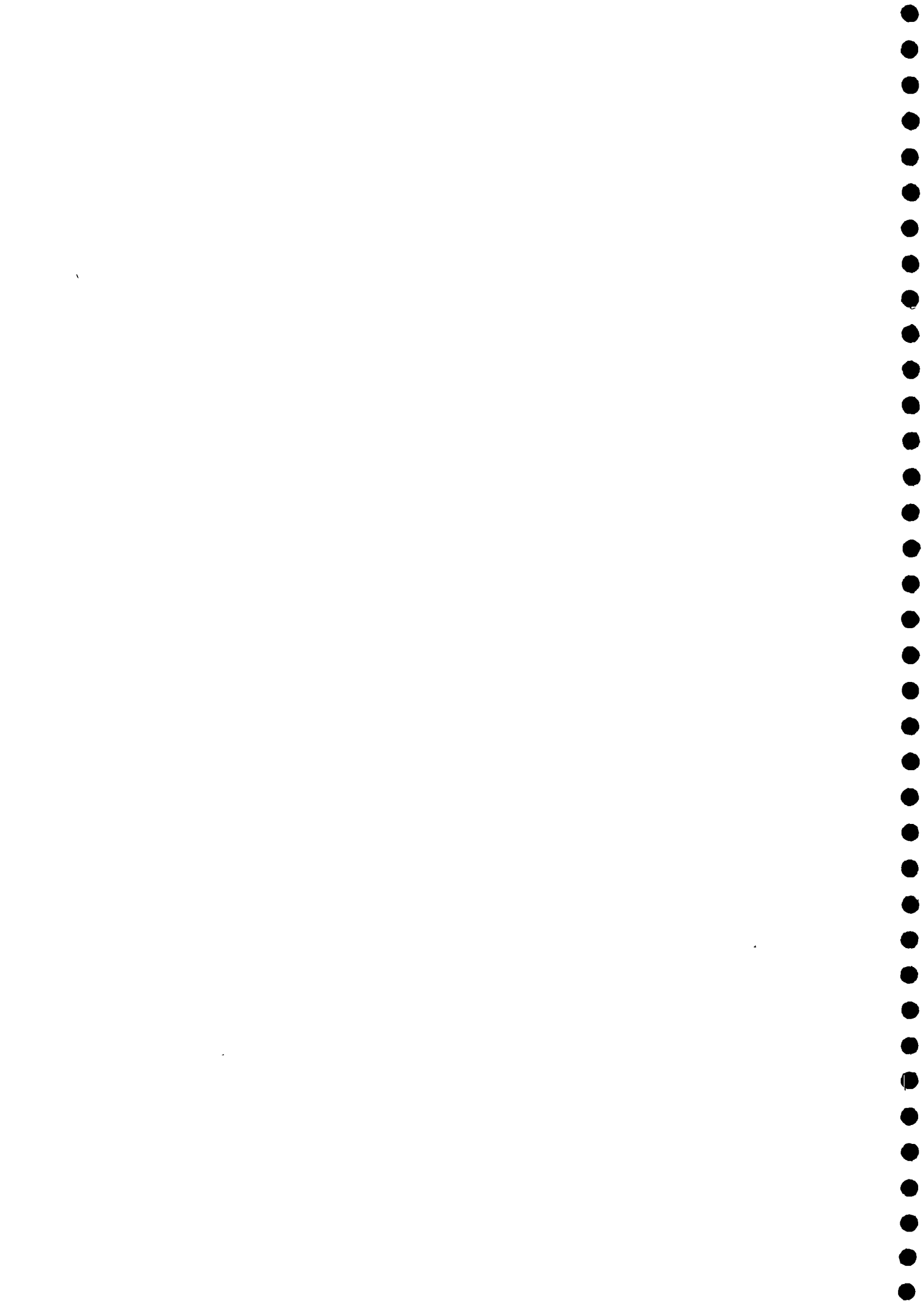
Distric - Dumka.

Block - Nalga.

1.	Name of Village	Code No	Population 1991	1994-95			1995-96			1996-97			1997-98			Remarks
				No. of T/O Upward	Population	Status	No. of T/O Upward	Population	Status	No. of T/O Upward	Population	Status	No. of T/O Upward	Population	Status	
1.	Dabher ✓	12	332	-	352	PC	-	359	PC	2	366	PC	2	373	PC	
2.	Jhal Dumriya ✓	16	65	1	69	PC	2	70	PC	2	72	PC	2	74	PC	
3.	Digariya ✓	14	685	3	726	PC	4	741	PC	4	756	PC	4	771	PC	
4.	Sukka	27	302	5	320	PC	5	326	PC	5	333	PC	5	340	PC	
5.	Pahrapur	32	381	2	616	PC	5	628	PC	5	641	PC	5	654	PC	
6.	Sangajari ✓	39	516	10	547	PC	10	558	PC	10	569	PC	11	580	PC	
7.	Bairagidih	40	283	1	300	PC	4	306	PC	4	312	PC	4	318	PC	
8.	Dumriya ✓	21	798	8	846	PC	8	863	PC	8	880	PC	8	898	PC	
9.	Barmahiy ✓	28	193	3	152	PC	3	155	PC	3	158	PC	3	161	PC	

*[Signature]*  
18/11/98  
S.E. Nalga

*[Signature]*  
5/11/98  
जनसंख्या अधिकारी  
संघ सहायक प्रमुख  
दुमका



## ANNEXURE I

Coverage Status of these villages in these years under Kamekhan block :-

Sl No	Name of Village	Code No	Population	Coverage Status				Position upto 3/98	Remarks
				94-95	95-96	96-97	97-98		
1	2	3	4	5	6	7	8	9	10
1.	Bora	13	2741	12 - Pc	1 - Pc	2 - Pc	Pc	Pc	} these villages are divided into different Tolas. On the basis of 250 population it has been designed for itself. Now on the basis of 150 population it has been changed and some Tolas of the villages are partially covered and some are fully covered them.
2.	Charikapathar	14	147	1 - Pc	-	1 - Fc	Fc	Fc	
3.	Birbora	15	1809	4 - Pc	-	1 - Pc	Pc	Pc	
4.	Kuchiyadali	16	472	1 - Pc	1 - Pc	2 - Fc	Fc	Fc	
5.	Kanikodari	8	1403	2 - Pc	-	1 - Pc	1 - Pc	Pc	
6.	Jogalimpur	19	906	14 - Pc	-	3 - Fc	Fc	Fc	
7.	Brindaban	9	3133	7 - Pc	1 - Pc	3 - Pc	L-Pc	Pc	
8.	Bilkandi	10	2142	10 - Pc	-	2 - Fc	Fc	Fc	
9.	Patusalai	18	1151	3 - Pc	1 - Pc	1 - Fc	Fc	Fc	
10.	Hatkadma	28	209	1 - Pc	-	1 - Fc	Fc	Fc	

31.7.98  
JE

P.H. Seetambada

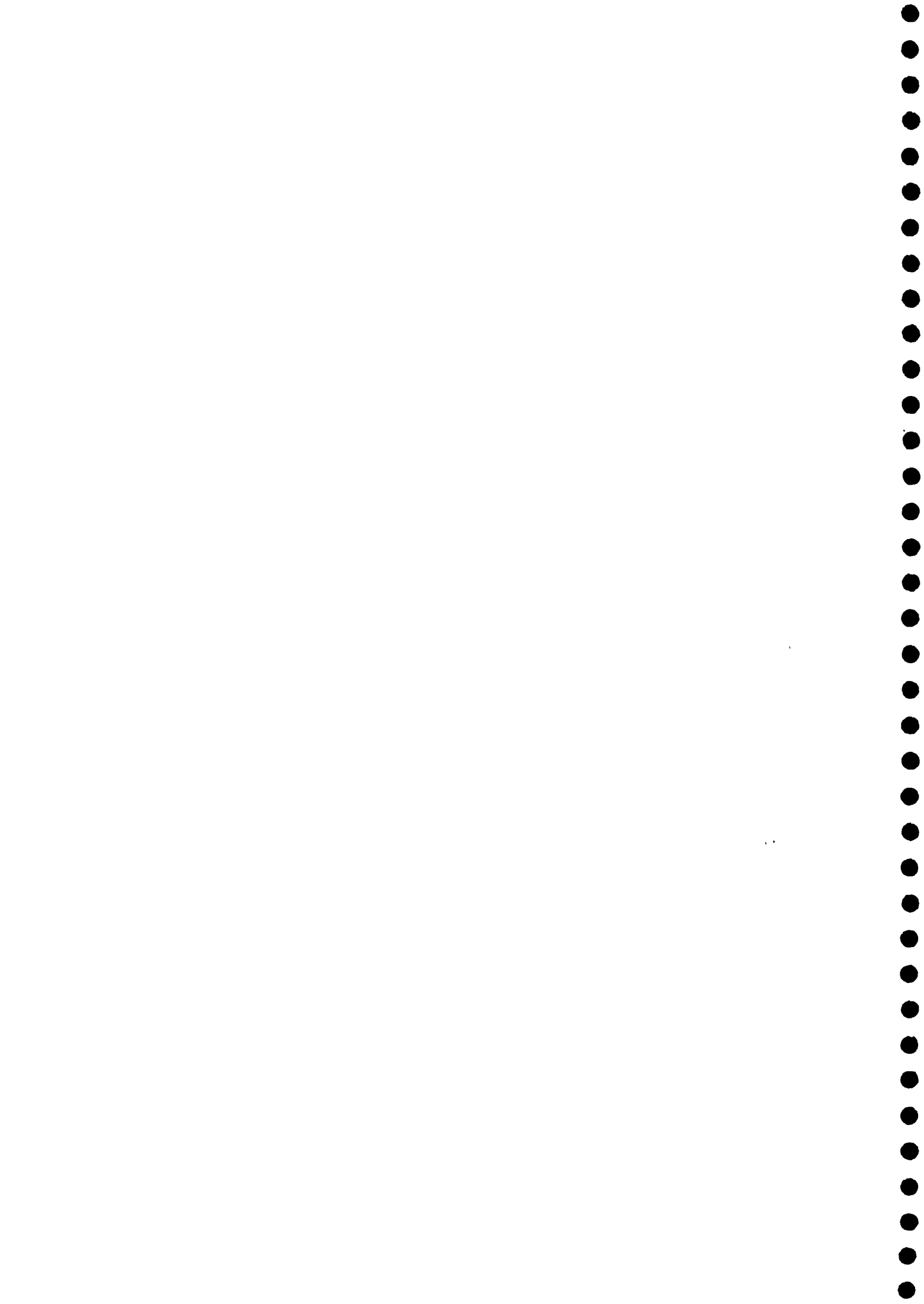
21/7/98  
Assistant Engineer  
P.H. Subdivision

S.D.A. Dumka

21/8/98

EE

P.H. Division Dumka



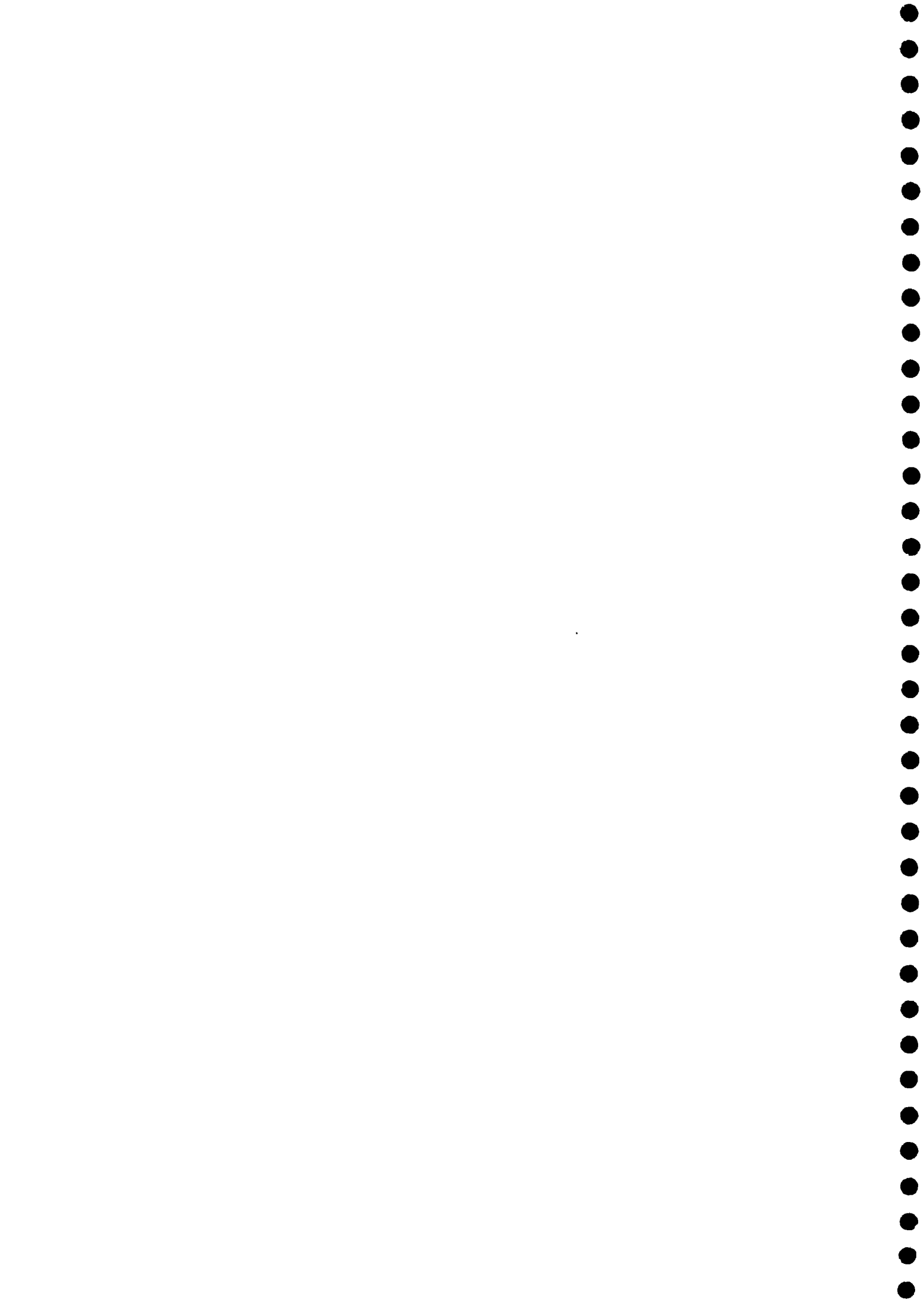
Block - Sisai

ANNEXURE I

Sl. No	Village.	Village Code	1994-95 (Before)			In 1994-95	1995-96	1996-97	1997-98	Total	Rang.	Record etc
			No. of Hous.	Population	Status							
1	Sisai ✓	76	70	4986	FC	1 FC	—	—	13 FC	84	"N" Tola	FC
2	Kudom ✓	77	12	1040	FC	3 FC	—	—	1	16	"	FC
3	Gurugau ✓	78	8	621	FC	— FC	—	—	1	9	"	FC
4	Nimara ✓	80	7	237	FC	— FC	—	—	—	7	—	FC
5	Daraha ✓	81	11	930	FC	— FC	—	—	1	12	"N" Tola	FC
6	Sakarauli	72	15	902	FC	4 FC	—	—	—	19	—	FC
7	Bhadoli	75	19	1338	FC	— FC	—	—	—	19	—	FC
8	Lakya	74	23	2312	FC	— FC	—	—	3	26	"N" Tola	FC
9	Lilki	47	14	692	FC	— FC	—	—	1	15	"	FC

171  
 P.H. Sec. Sisai  
 30/7/1986  
 J.E.

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 लोक स्वा. अवर प्रमण्डल  
 सं- 2, गुमना





Block - Bharno

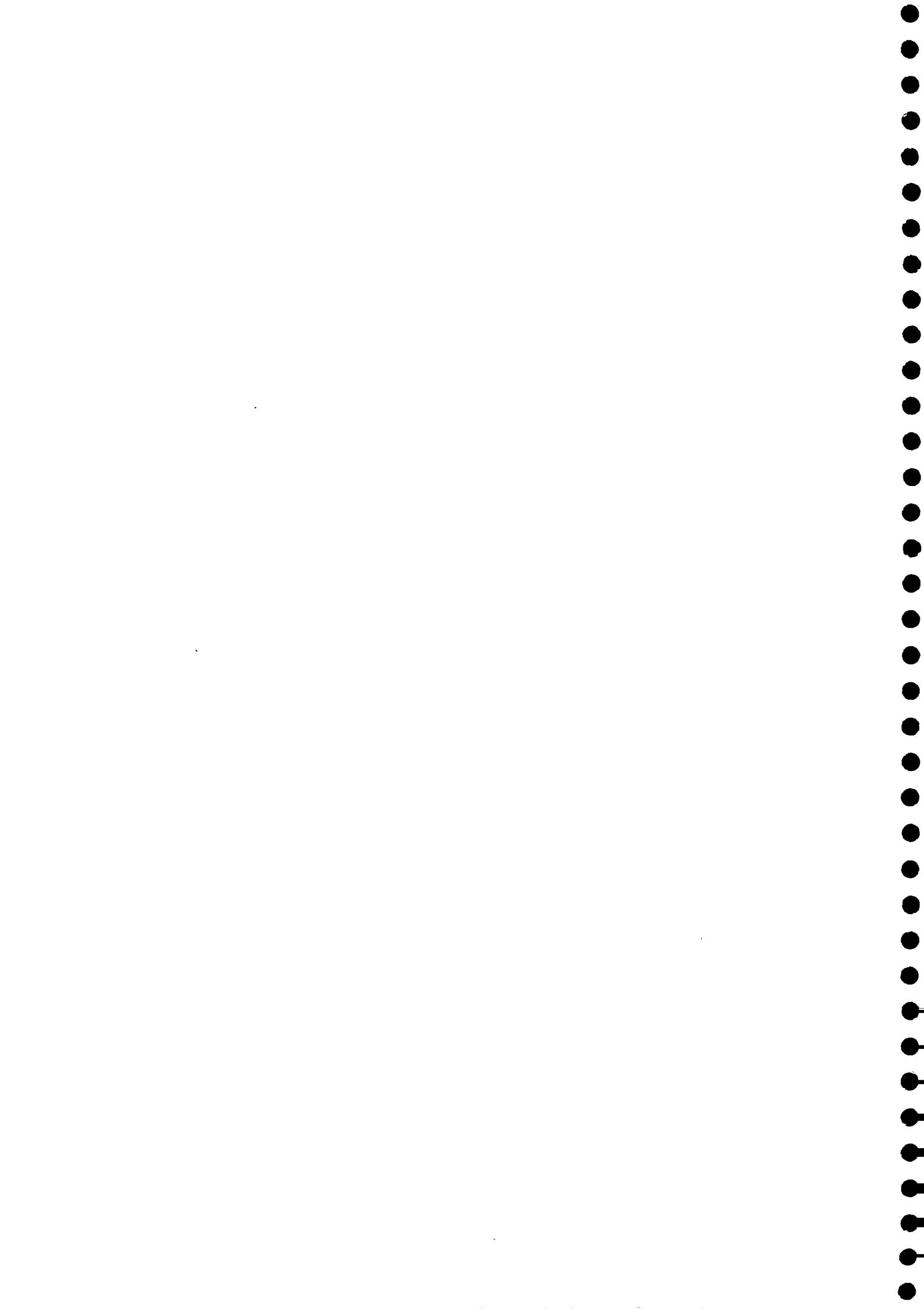
ANNEXURE I

Sl. No	Village	Village Code	Before 1994-95			1994-95	1995-96	1996-97	1997-98	Total	Present Condition	Kasab Condition
			No. of HHs	Population	Status							
1	Atakoso	83	22	247	FC	—	—	—	22	FC		
2	Karnulpur	117	3	108	FC	1	—	—	4	FC		
3	Khartanga	118	6	403	FC	1	—	—	7	FC		
4	Marsilli	120	10	266	FC	—	—	—	10	FC		
5	Dumbo ✓	125	12	582	FC	—	—	—	12	FC		
6	Kumboso ✓	122	5	781	FC	—	—	—	5	FC		
7	Kharko ✓	121	1	190	FC	—	—	—	1	PC	Collapsible Zone	
8	Parba J	113	<del>5</del>	392	FC	—	—	1	6	FC		
9	Chatol ✓	114	3	496	FC	1	—	—	4	FC		

J.E.  
P.H. Sec. Bharno

अवर प्रमण्डल पदाधिकारी  
लोक स्वा. अवर प्रमण्डल  
सं- 2, गुमना

ANNEXURE I



Block. — Gumb  
 PISH — Gumb (Bihar)

ANNEXURE I

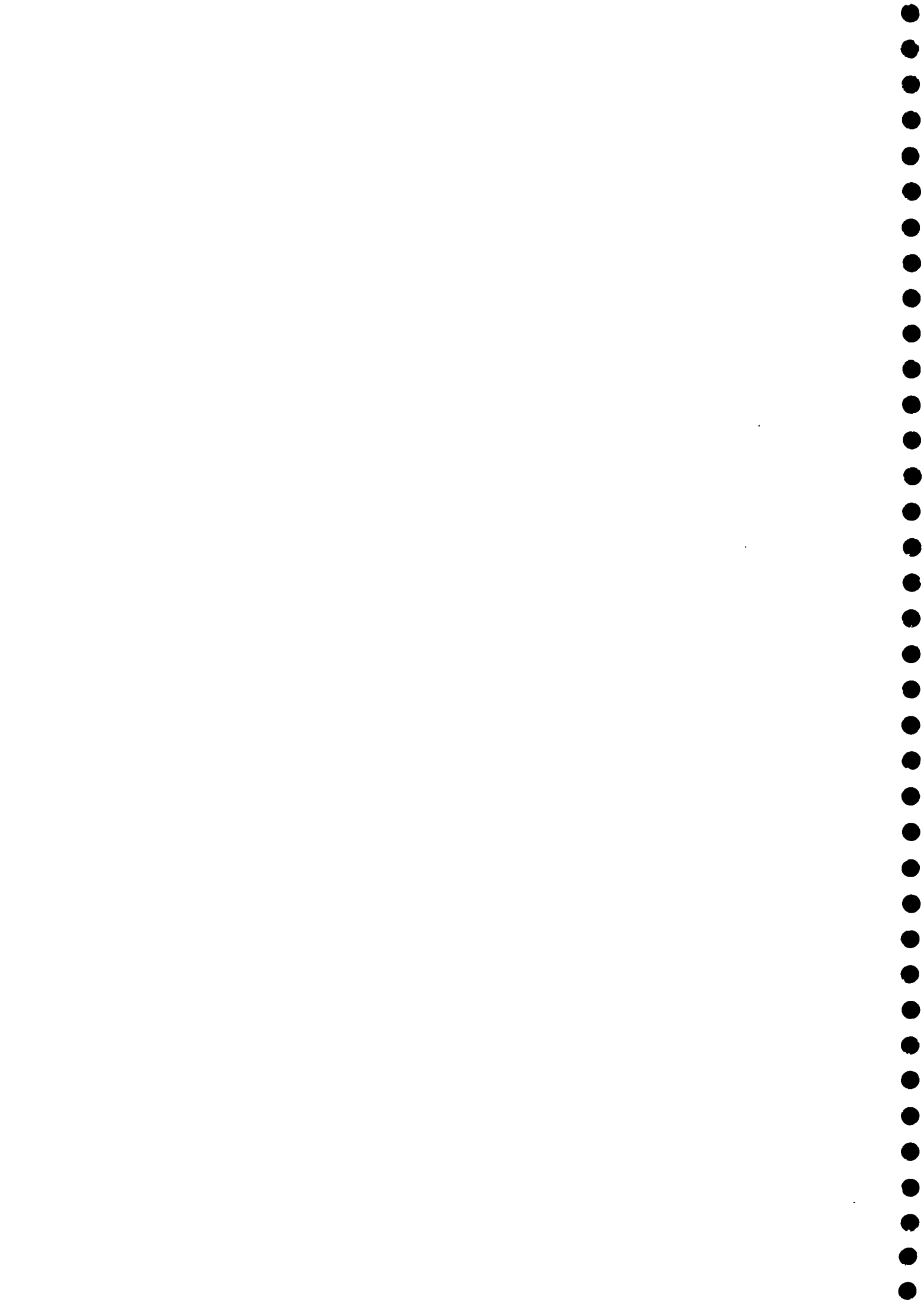
Sl. No	Code No	Name of Rev. Village	93-94			94-95			95-96			96-97			97-98			Remarks
			Hgt of Well	Population	Status	Hgt of Well	Population	Status	Hgt of Well	Population	Status	Hgt of Well	Population	Status	Hgt of Well	Population	Status	
1	60	Phasia	6	845	F.c	7	862	F.c	7	879	F.c	7	897	F.c	7	915	F.c	
2	61	Tansa	6	499	"	7	509	"	7	519	"	7	529	"	7	539	"	
3	63	Dumardil	9	1016	"	9	1036	"	9	1057	"	9	1078	"	9	1100	"	
4	65	Arniya	11	1473	"	13	1451	"	13	1480	"	13	1510	"	13	1540	"	
5	66	Puga	17	2374	"	19	2421	"	19	2469	"	19	2518	"	19	2568	"	
6	67	Babhani	7	409	"	7	417	"	7	425	"	7	433	"	7	437	"	
7	77	Khosa	21	2641	"	25	2694	"	25	2748	"	25	2803	"	25	2859	"	
8	87	Kumhari	11	1608	"	11	1640	"	11	1673	"	11	1706	"	12	1740	"	
9	88	Dhodra	7	808	"	9	834	"	9	851	"	9	868	"	9	885	"	

RR

29/7/98  
 J & Gumb

बिहार पशुधन  
 सेवा विभाग  
 पं० ३ मुबारा

ANNEXURE I



ANNEXURE II

CONFIDENTIAL

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DRAFT HOUSEHOLD SCHEDULE

FOR

STUDY ON CENTRAL RURAL WATER SUPPLY SCHEME IN BIHAR

Instruction:-- 1. Put a circle on the code wherever applicable.  
2. If space provided is not sufficient use spare sheet.

1. Status of village as per coverage under Central Rural Water Supply Programme :

- 11 Fully covered
- 12 Partially covered
- 13 Not covered

HOUSEHOLD PARTICULARS

2. Name of the Respondent :-----

Address of respondent :

Village :

Block : District :

3. Caste

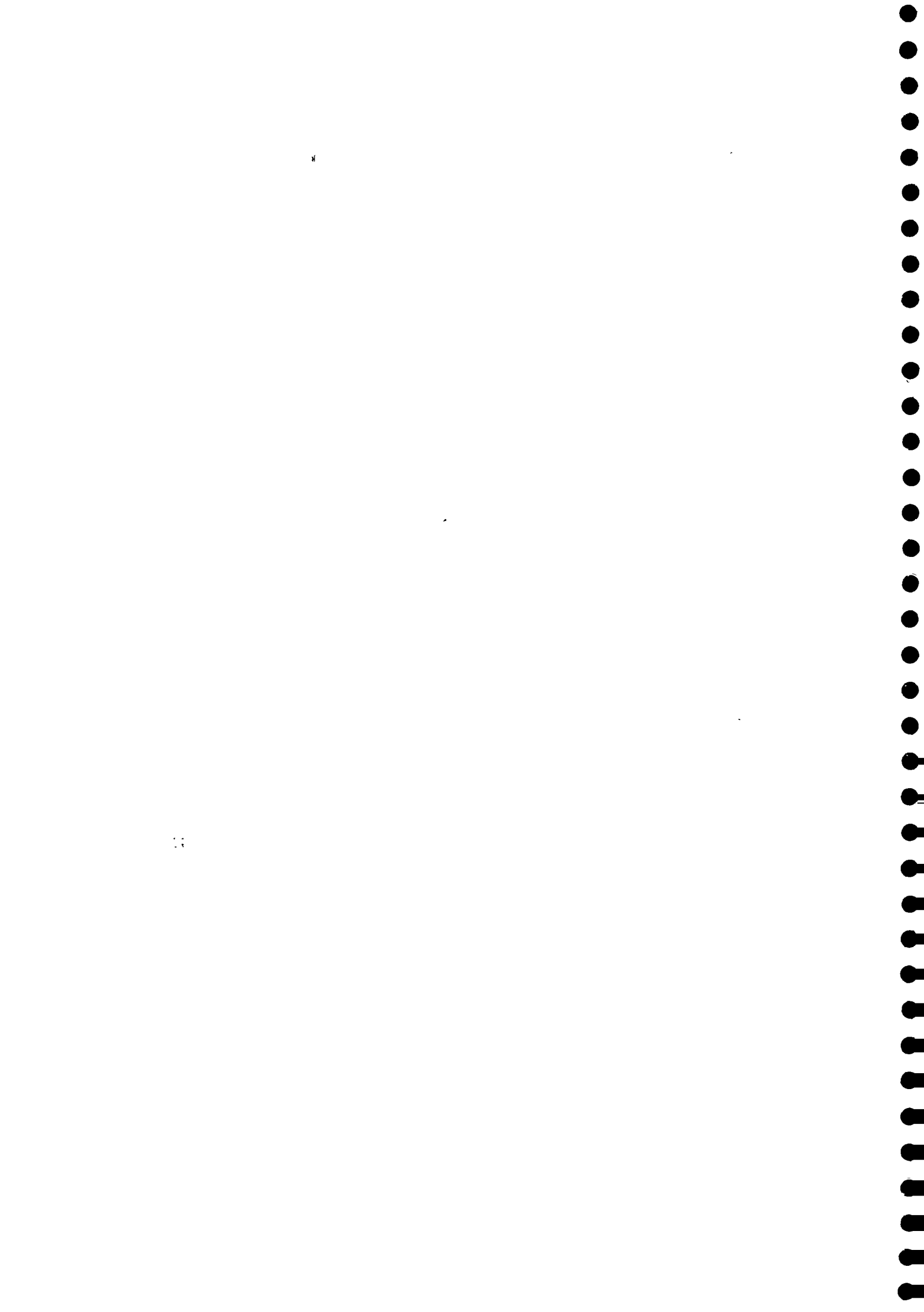
- 31 Scheduled Caste
- 32 Scheduled Tribe
- 33 Backward Caste
- 34 Any other caste

4. Family Occupation

- 41 Farmer
- 42 Landless labourer
- 43 Artisan
- 44 Service
- 45 Any Other (specify)

5. Total Family members :

- 51 1 - 2
- 52 3 - 4
- 53 5 - 6
- 54 7 - 8
- 55 more than 8



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6. Total earning members in the family :

61 1 - 2  
62 3 - 4  
63 5 - 6  
64 7 - 8  
65 more than 8

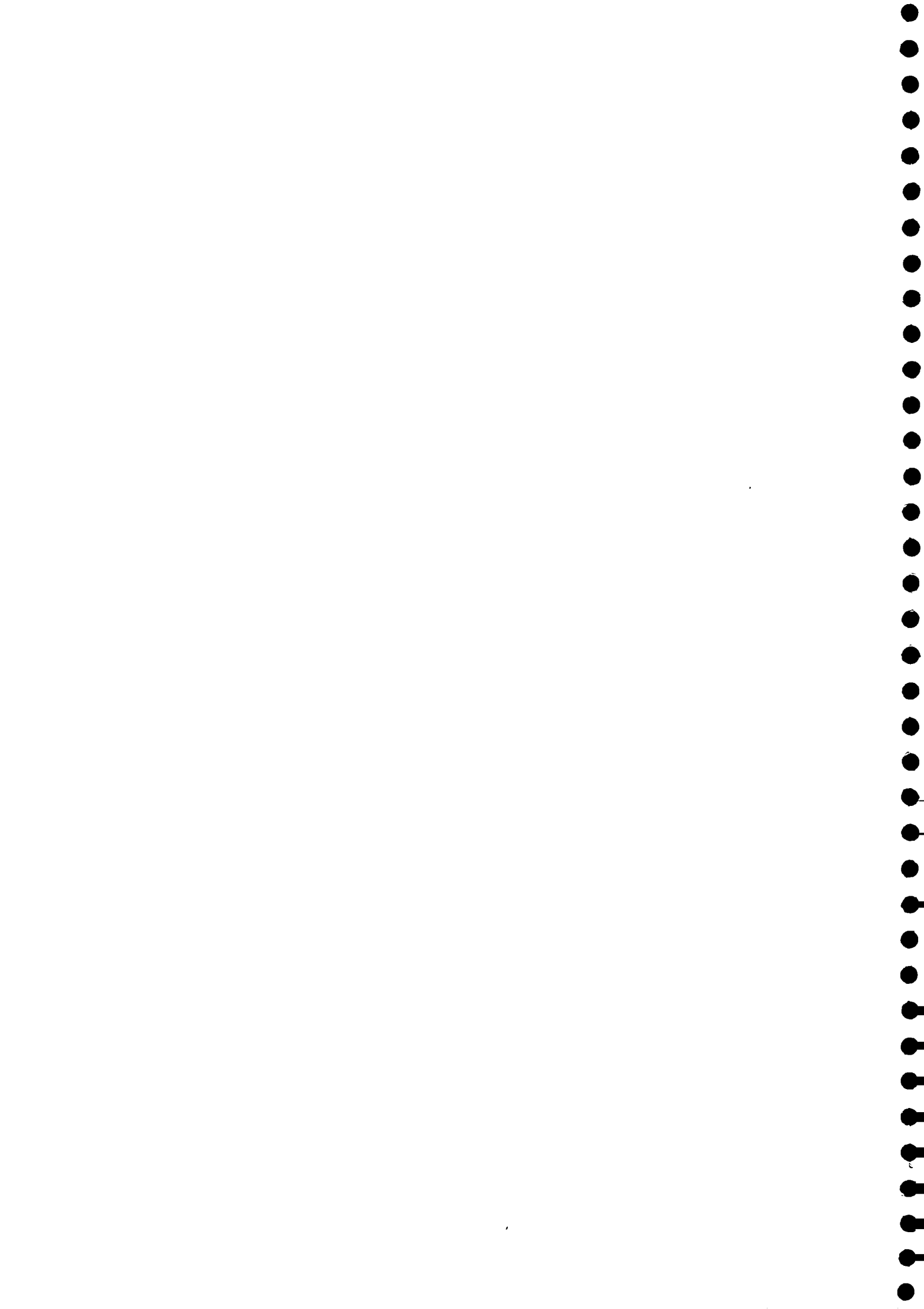
7. Total Annual Income of family :

701 Upto Rs. 1000/-  
702 Rs. 1001 - Rs. 2000/-  
703 Rs. 2001 - Rs. 3000/-  
704 Rs. 3001 - Rs. 4000/-  
705 Rs. 4001 - Rs. 5000/-  
706 Rs. 5001 - Rs. 6000/-  
707 Rs. 6001 - Rs. 7000/-  
708 Rs. 7001 - Rs. 8000/-  
709 Rs. 8001 - Rs. 9000/-  
710 Rs. 9001 - Rs. 10000/-  
711 More than Rs. 10,000/-

**REQUIREMENT OF WATER**

8. What is your family's total daily requirement of water :

Quantity (in litres)	Drinking & Cooking	Washing & Bathing	Cattle	Gross Total
upto 50	8011	8012	8013	8014
50 - 100	8021	8022	8013	8014
100 - 150	8031	8032	8013	8014
150 - 200	8041	8042	8013	8014
200 - 250	8051	8052	8013	8014
250 - 300	8061	8062	8013	8014
300 - 350	8071	8072	8013	8014
350 - 400	8081	8082	8013	8014
400 - 450	8091	8092	8013	8014
450 - 500	8101	8102	8013	8014
More than 500	8111	8112	8013	8014





DETAILS OF WATER SOURCES AND PROBLEMS BEFORE ACCELERATED RURAL WATER SUPPLY PROGRAMME (ARWSP)

9. What were the major sources of water supply before the Accelerated Rural Water Supply Programme :

SOURCE	Drinking & Cooking	Washing & Bathing	Cattle
91 Community well	911	912	913
92 Own well	921	922	923
93 Pond	931	932	933
94 Lake	941	942	943
95 River / canal	951	952	953
96 Any other (please specify)	961	962	963

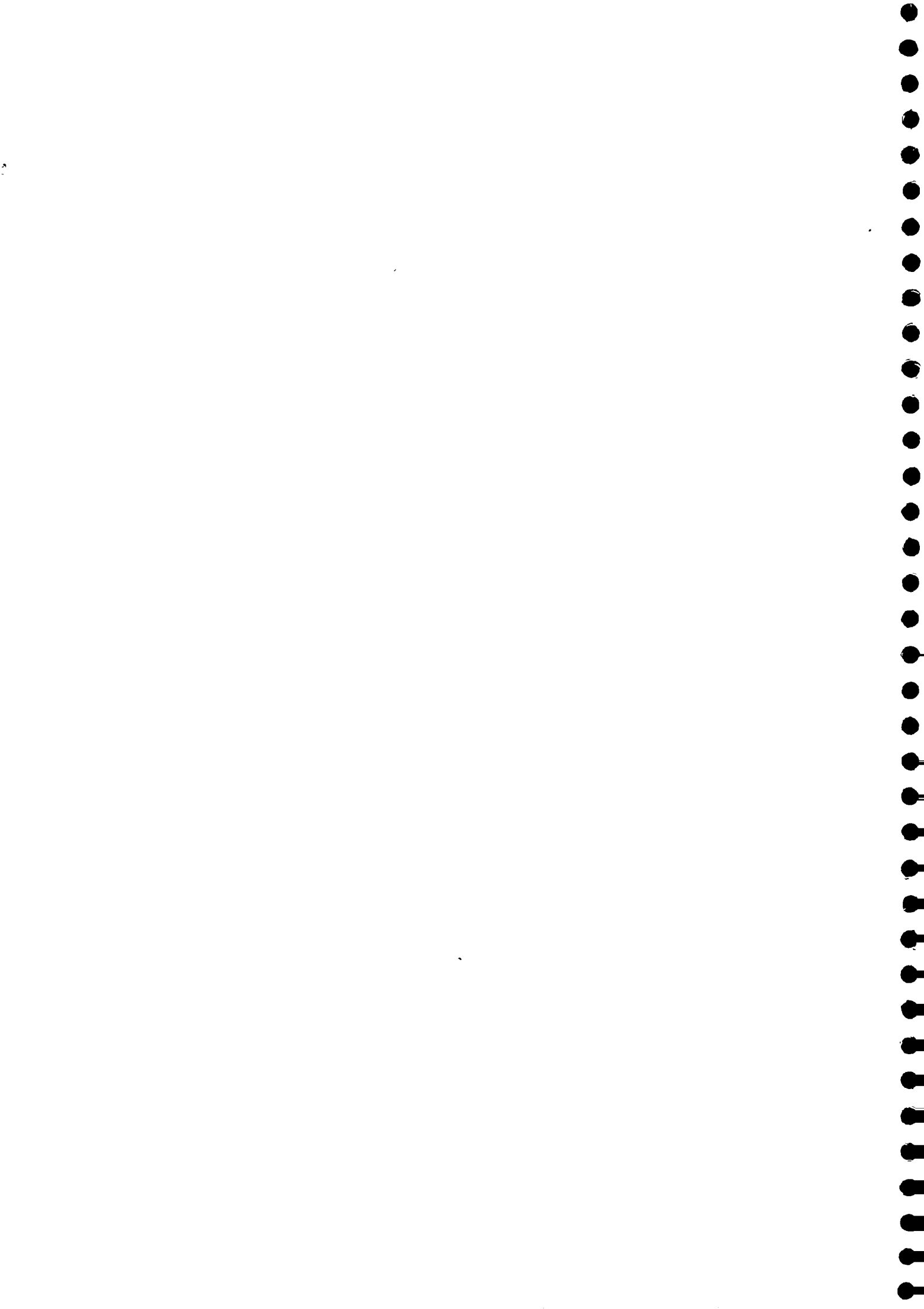
10. What were the major problems in getting the water for your requirements before Accelerated Rural Water Supply Programme ?

- 101 Adequate quantity was not available
- 102 Irregular supply / availability
- 103 Water available was unhygienic.
- 104 Sources of water used to get dried up at times
- 105 Distance of source of water was large
- 106 Any other (Pl. specify)

DETAILS OF WATER SOURCES AND PROBLEMS AFTER ARWSP

11. What is the duration of the scarcity and non-scarcity periods in the water supply in your area :

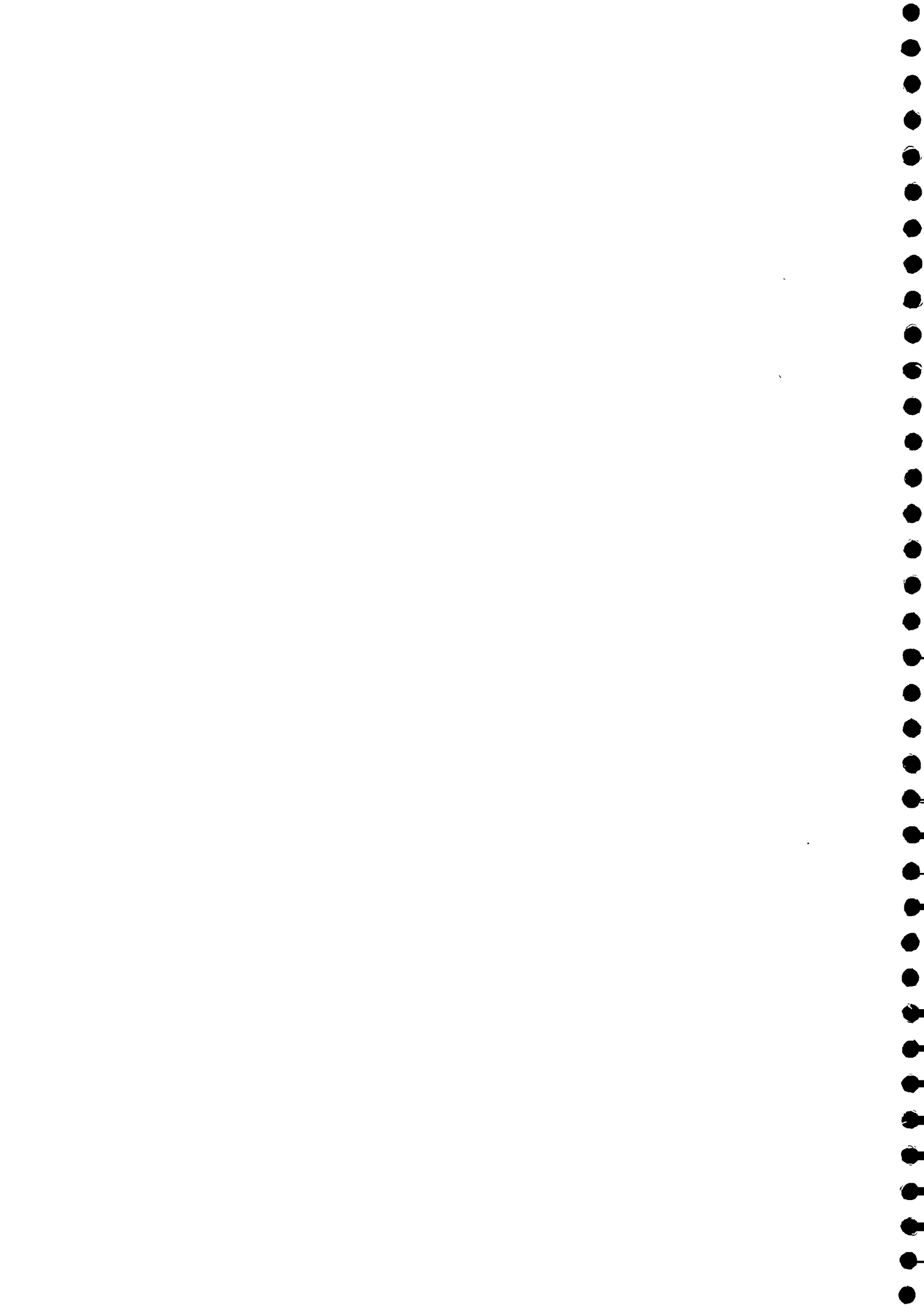
Period (in months)	Scarcity	Non-scarcity
1 - 2	111	112
3 - 4	121	122
5 - 6	131	132
7 - 8	141	142
9 - 10	151	152
11- 12	161	162



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12. Give details of your current sources of water supply, the distance of water source and quality of water available :

SOURCE	QUALITY				DISTANCE FROM HOME IN METERS									
	Potable		Non-Potable		0-50	>50-100	>100-150	>150-200	>200-250	>250-300	>300-350	>350-400	>400	
	Normal	Sweat	Normal	Sweat										
<b>Government Supply 12111</b>														
Hand Pump / Stand Post	121111	121121	121211	121221	12211	12221	12231	12241	12251	12261	12271	12281	12291	
Piped Water Supply	121112	121122	121212	121222	12212	12222	12232	12242	12252	12262	12272	12282	12292	
Mound Water Supply	121113	121123	121213	121223	12213	12223	12233	12243	12253	12263	12273	12283	12293	
Any other (Pl specify)	121114	121124	121214	121224	12214	12224	12234	12244	12254	12264	12274	12284	12294	
<b>Non-Government / private supply 12112</b>														
Community well	121121	121122	121221	121222	12212	12222	12232	12242	12252	12262	12272	12282	12292	
Own well	121122	121123	121222	121223	12212	12222	12232	12242	12252	12262	12272	12282	12292	
Pond	121123	121124	121223	121224	12213	12223	12233	12243	12253	12263	12273	12283	12293	
Lake	121124	121125	121224	121225	12214	12224	12234	12244	12254	12264	12274	12284	12294	
River / canal	121125	121126	121225	121226	12215	12225	12235	12245	12255	12265	12275	12285	12295	
Any other (please specify)	121126	121127	121226	121227	12216	12226	12236	12246	12256	12266	12276	12286	12296	



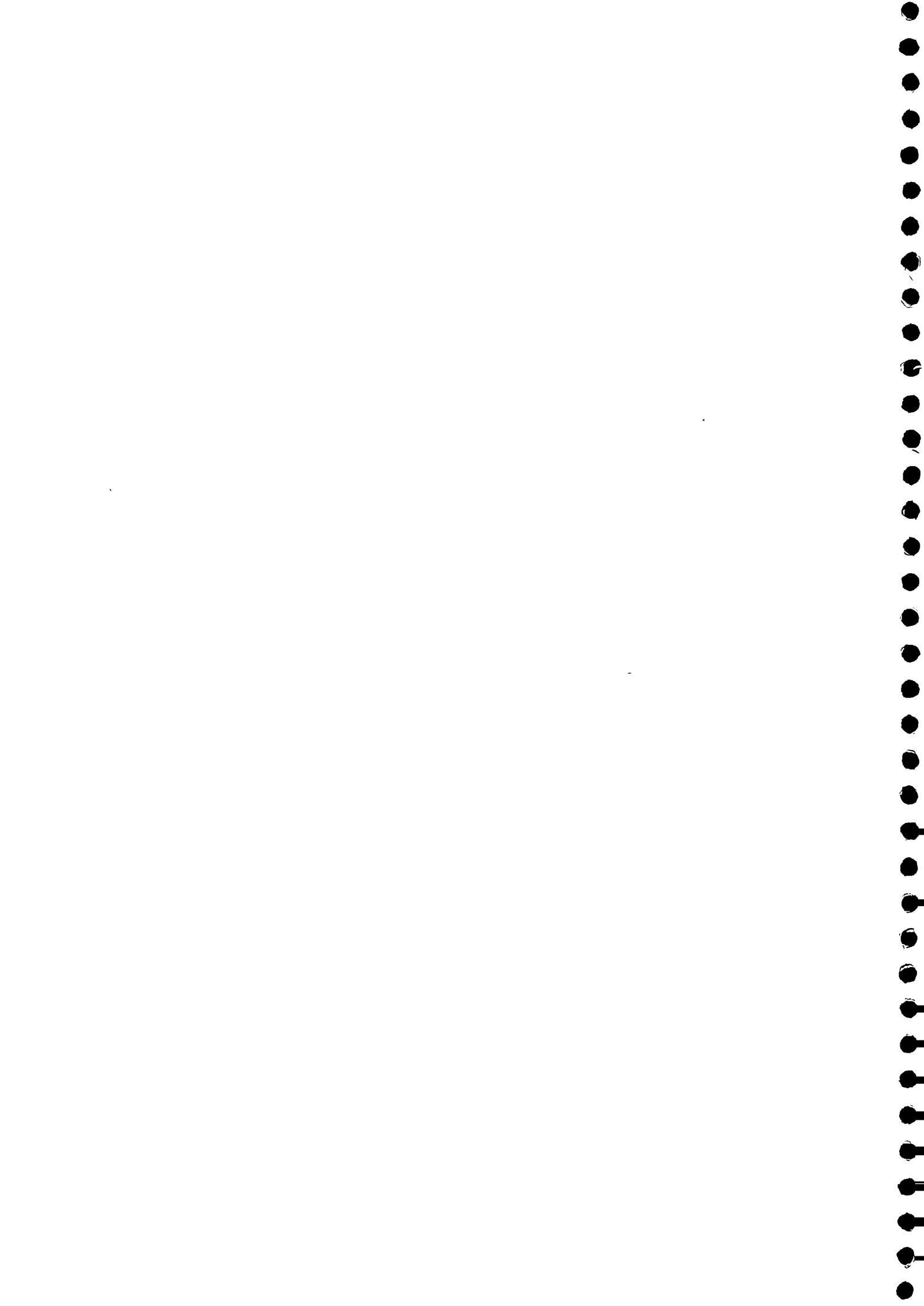
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13. What are your current availability of water supply during scarcity and non-scarcity periods :

SCARCITY PERIOD				NON-SCARCITY PERIOD			
QUANTITY				QUANTITY			
Drinking & Cooking	Washing & Bathing	Cattle	Total (in litres) Quantity	Drinking & Cooking	Washing & Bathing	Cattle	Total Quantity (in litres)
13111	13112	13113	13114 upto 50	13211	13212	13213	13214
13121	13122	13123	13124 50 - 100	13221	13222	13223	13224
13131	13132	13133	13134 100 - 150	13231	13232	13233	13234
13141	13142	13143	13144 150 - 200	13241	13242	13243	13244
13151	13152	13153	13154 200 - 250	13251	13252	13253	13254
13161	13162	13163	13164 250 - 300	13261	13262	13263	13264
13171	13172	13173	13174 300 - 350	13271	13272	13273	13274
13181	13182	13183	13184 350 - 400	13281	13282	13283	13284
13191	13192	13193	13194 >400 - 450	13291	13292	13293	13294

14. What is the frequency of water supply / release in case of Piped Water Supply / Metered Water Supply :

Duration (in Hrs.)	Scarcity Period	Non-Scarcity Period
<b>Morning</b>		
1 - 2	14111	14211
3 - 4	14112	14212
5 - 6	14113	14213
Any other (Pl. specify)	14114	14214
<b>Evening</b>		
1 - 2	14121	14221
3 - 4	14122	14222
5 - 6	14123	14223
Any other (Pl. specify)	14124	14224
Full day	1413	1423
Any other (pl. specify)	1414	1424



15. Do you still have any problems in getting water for your requirements after Accelerated Rural Water Supply Programme ?

151 Yes

152 No

If yes, then what is the nature of the problems :

1511 Adequate quantity was not available

1512 Irregular supply / availability daily

1513 Irregular supply / availability during the day

1514 Water available was unhygeinic.

1515 Sources of water used to get dried up at times

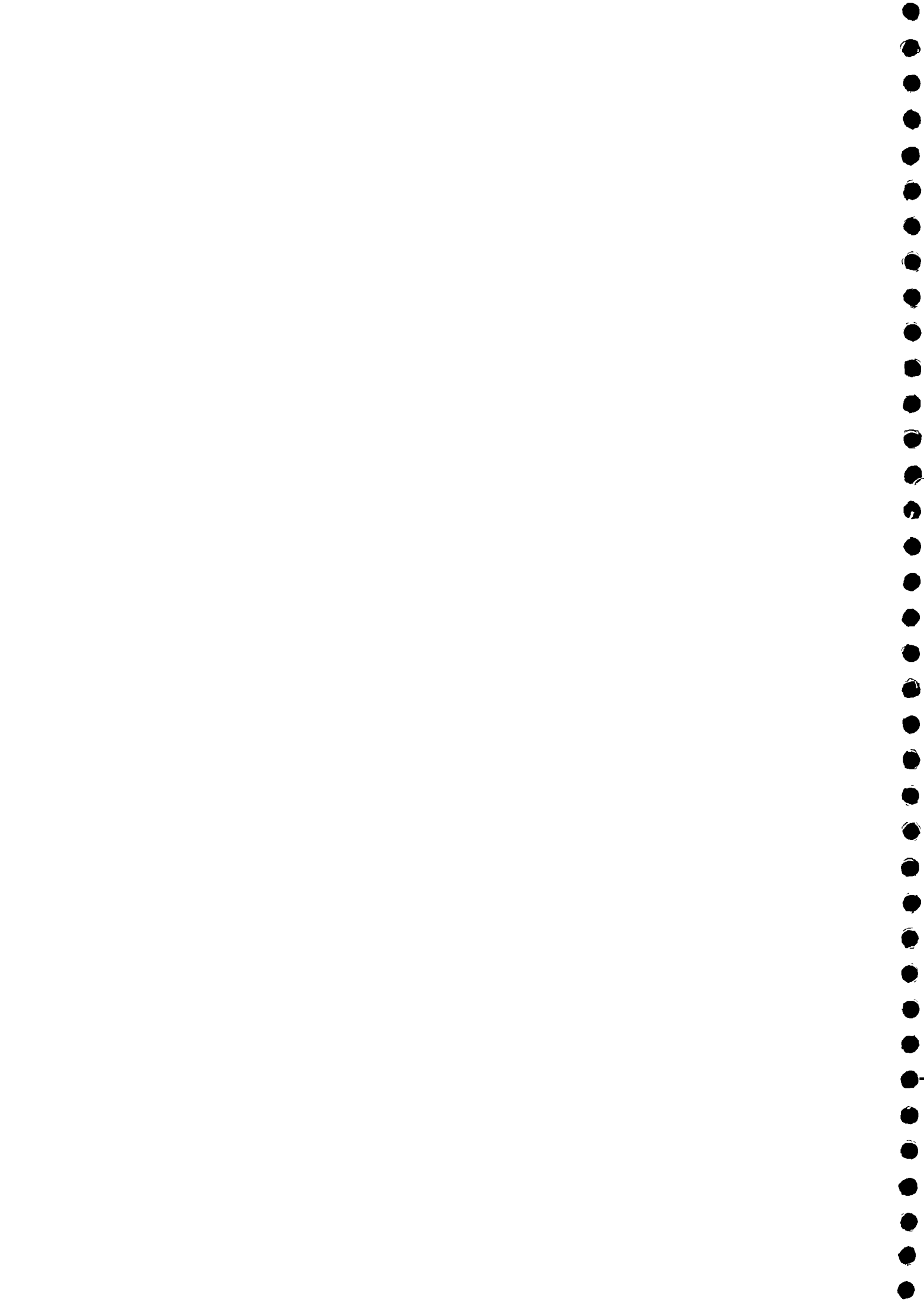
1516 Distance of source of water was large

1517 Any other (pl. specify)

OPERATION AND MAINTENANCE OF WATER SOURCE

16. Who is responsible for the operation and maintenance of water source :

Functionary	Hand Pump	Piped Water Supply	Metered Water Supply	Others (pl specify)
Individuals	1611	1612	1613	1614
Community	1621	1622	1623	1624
Village panchayat	1631	1632	1633	1634
NGO	1641	1642	1643	1644
Special committee formed (specify)	1651	1652	1653	1654
None	1661	1662	1663	1664
Others (specify)	1671	1672	1673	1674





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NEW DELHI**

17. Who meets the cost of operation & maintenance of water source

Functionary	Hand Pump	Piped Water Supply	Metered Water Supply	Others (Pl. specify)
Individual	1711	1712	1713	1714
Community Sharing	1721	1722	1723	1724
Village panchayat	1731	1732	1733	1734
NGO	1741	1742	1743	1744
None	1751	1752	1753	1754
Others (specify)	1761	1762	1763	1764

18. What is your opinion about the present system of operation & maintenance of water source :

181 Satisfactory

182 Unsatisfactory

If the system is unsatisfactory then what are the causes :

1821 Non-availability of trained manpower

1822 Non-availability of adequate funds

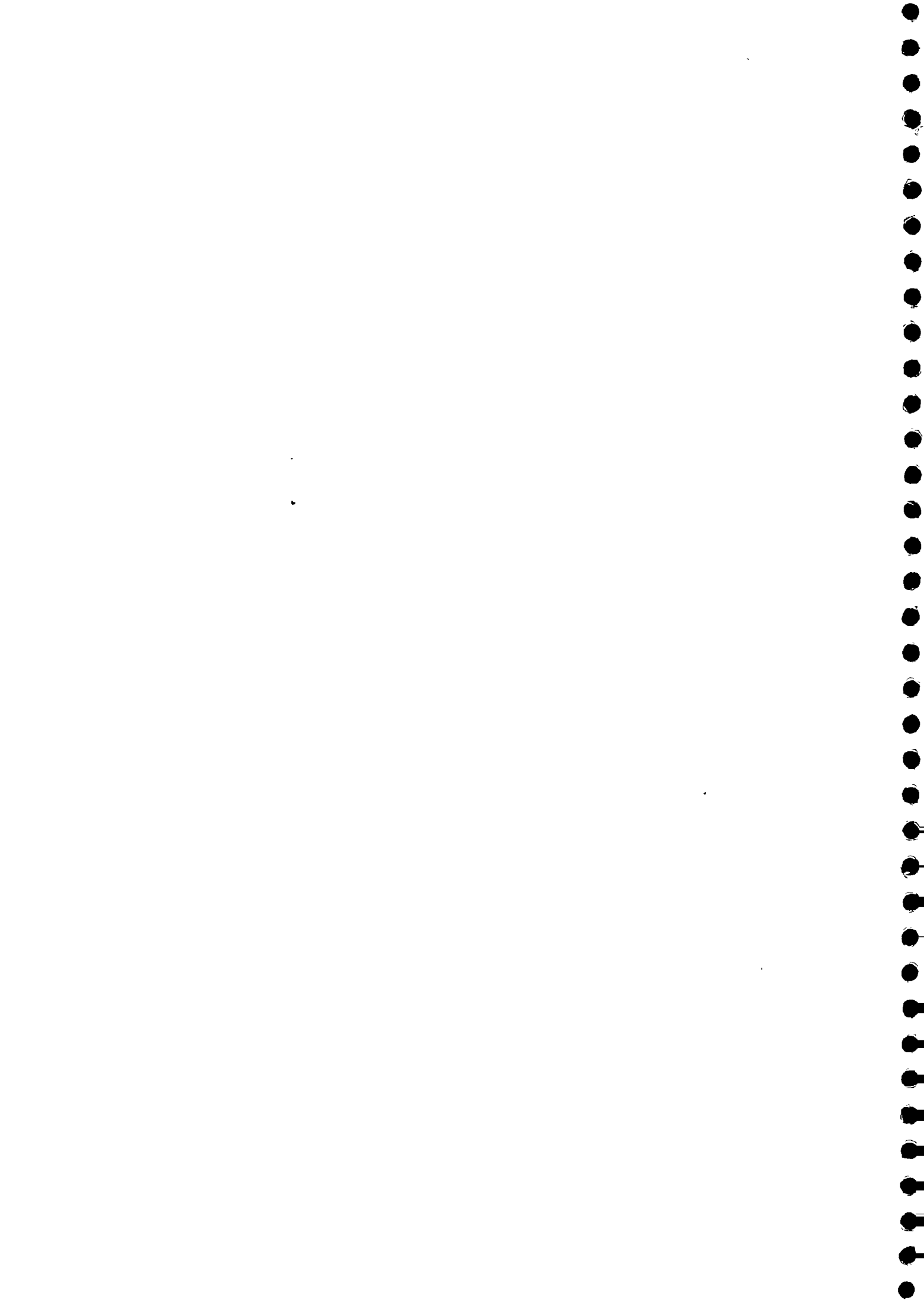
1823 Responsibility for O & M not fixed

1824 People do not pay their fixed share

1825 Any other (Pl. specify)

19. What is the functional status of the source of water supply

	Hand Pump	Piped Water Supply	Metered Water Supply	Others (Pl. specify)
191 Functioning				
- Satisfactory	1911	1912	1913	1914
- Unsatisfactory	1911	1912	1913	1914
192 Non-functioning	1921	1922	1923	1924



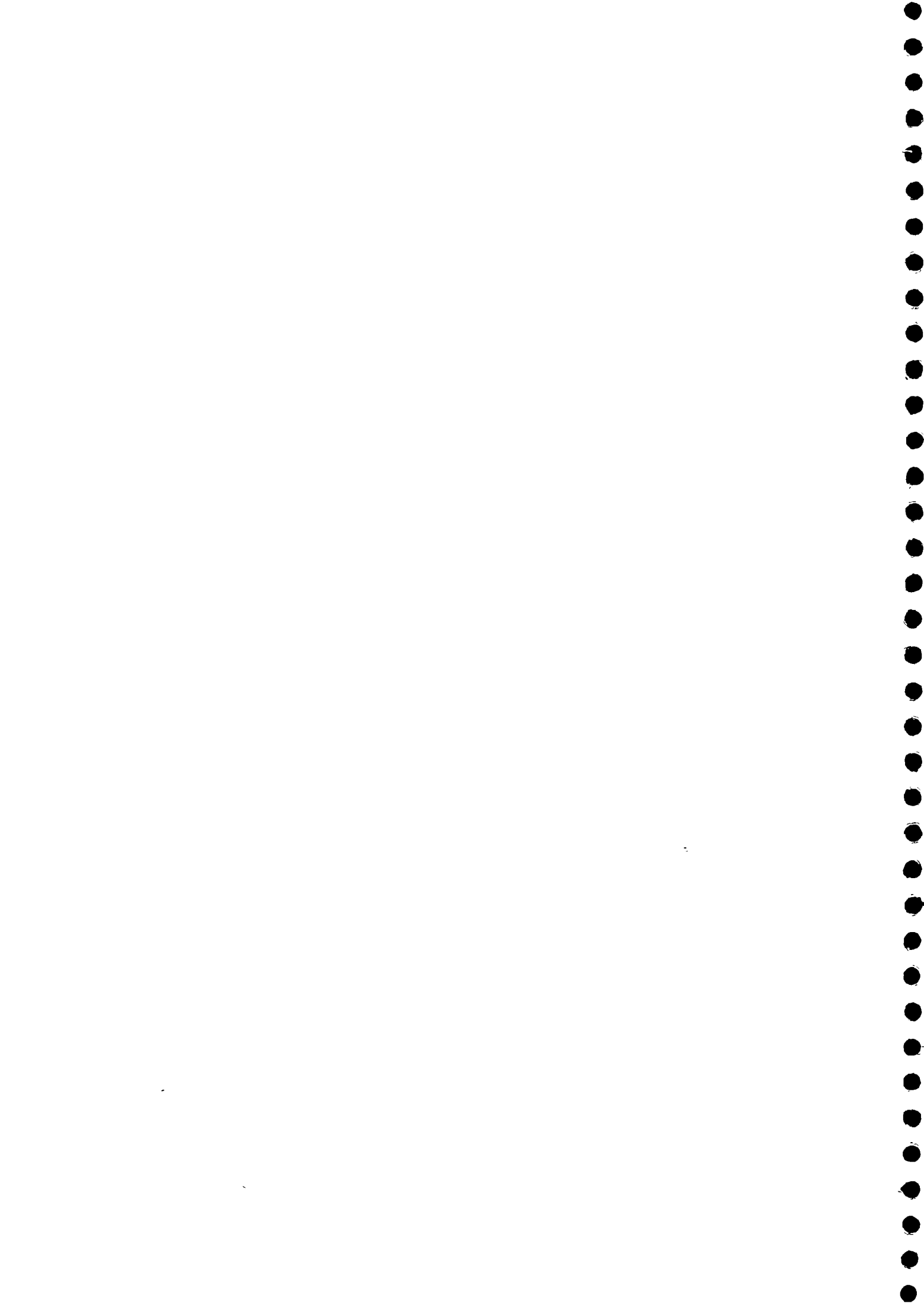
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NEW DELHI**

If it is non-functioning then mention the duration since it is non-functioning :

DURATION	Hand Pump	Piped Water Supply	Metered Water Supply	Others (Pl. specify)
Since last 2-3 days	19211	19221	19231	19241
Since last one week	19212	19222	19232	19242
Since a fortnight	19213	19223	19233	19243
Since a month	19214	19224	19234	19244
Since 2 months	19215	19225	19235	19245
More than 2 months	19216	19226	19236	19246

20. What is the frequency of the source going out of order (non-functional) :

DURATION	Hand Pump	Piped Water Supply	Metered Water Supply	Others (Pl. specify)
Once a week	2011	2021	2031	2041
Once a fortnight	2012	2022	2032	2042
Once a month	2013	2023	2033	2043
Once in 2 months	2014	2024	2034	2044
Once in a quarter	2015	2025	2035	2045
Once a year	2016	2026	2036	2046
Once a 2 year	2017	2027	2037	2047
Once in above 2 years	2018	2028	2038	2048
Others (specify)	2019	2029	2039	2049



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21. What is the main reason for source going out of order :

REASON	Hand Pump	Piped Water Supply	Metered Water Supply	Others (Pl. specify)
Faulty installation	2111	2112	2113	2114
Sub-standard equipment	2121	2122	2123	2124
Improper use	2131	2132	2133	2134
Damage due to natural calamities	2141	2142	2143	2144
Damage by miscreants	2151	2152	2135	2154
Theft of parts	2161	2162	2163	2164
Others (specify)	2171	2172	2173	2174

22. Who should meet the costs to be incurred for proper and regular water supply such as piped water supply :

	Capital Cost of Installation	Cost of Operation Maintenance
- Government	2211	2212
- Panchayat	2221	2222
- NGO	2231	2232
- Jointly by government and Panchayat	2241	2242
- Self / Community	2251	2252
- Any other (pl. specify)	2261	2262

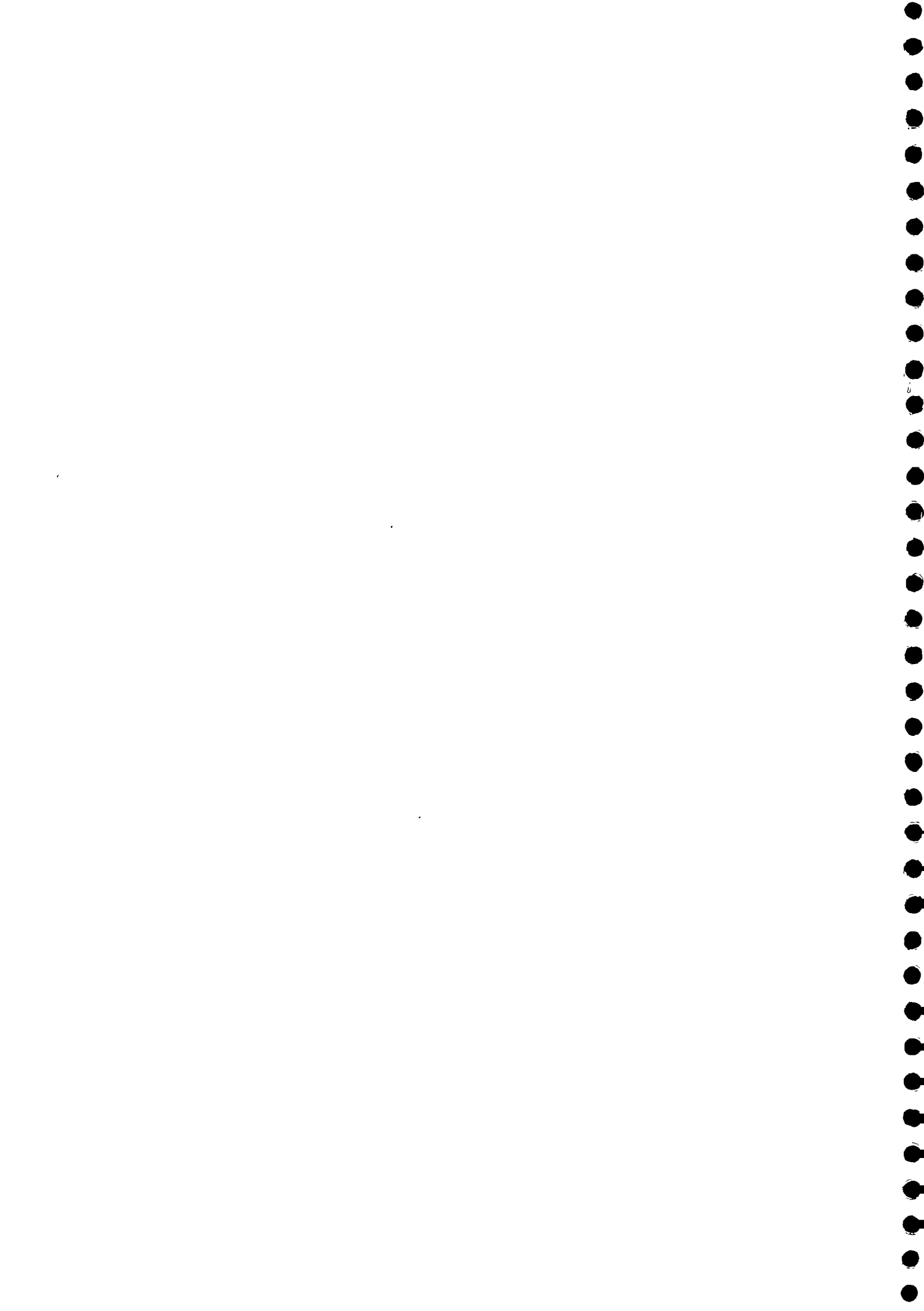
If the community / self should bear the cost of the installation / O & M, then what should be the extent and sharing pattern :

**2253 Sharing Pattern**

- 22531 Equal Share per household
- 22532 Propotionate to number of family members
- 22533 Propotionate to actual water consumption

**2254 Extent (in Rs. / Month)**

- 22541 0-20
- 22542 >20-40
- 22543 >40-60
- 22544 >60-80
- 22545 >80-100
- 22546 >100



STATUS OF HYGIENIC CONDITIONS AROUND WATER SOURCE

23. Whether the water source is maintained in hygienic conditions:

231 Yes

232 No

If no, then what are the causes and problems :

2321 Proper drainage system not provided

2322 Location not proper

2323 Necessary repairs not done

2324 Cleanliness not maintained

2325 Others (pl. specify)

24. Whether the water being supplied is fit for drinking and cooking :

241 Yes

242 No

If no, then what are the causes :

2421 Water is not free from biological contamination (causing diseases like guineaworms, cholera, typhoid, etc.)

2422 Water has excess flouride content

2423 Water has excess iron content

2423 Water is brackish

2425 Water is contaminated with other chemicals (arsenic materials, etc.)

2426 Testing of water is not undertaken at all

2427 Testing of water is not undertaken regularly

2428 Any other (pl. specify)

25. Do you think that the community is satisfied with water supply & related activities ?

251 Yes

251 No

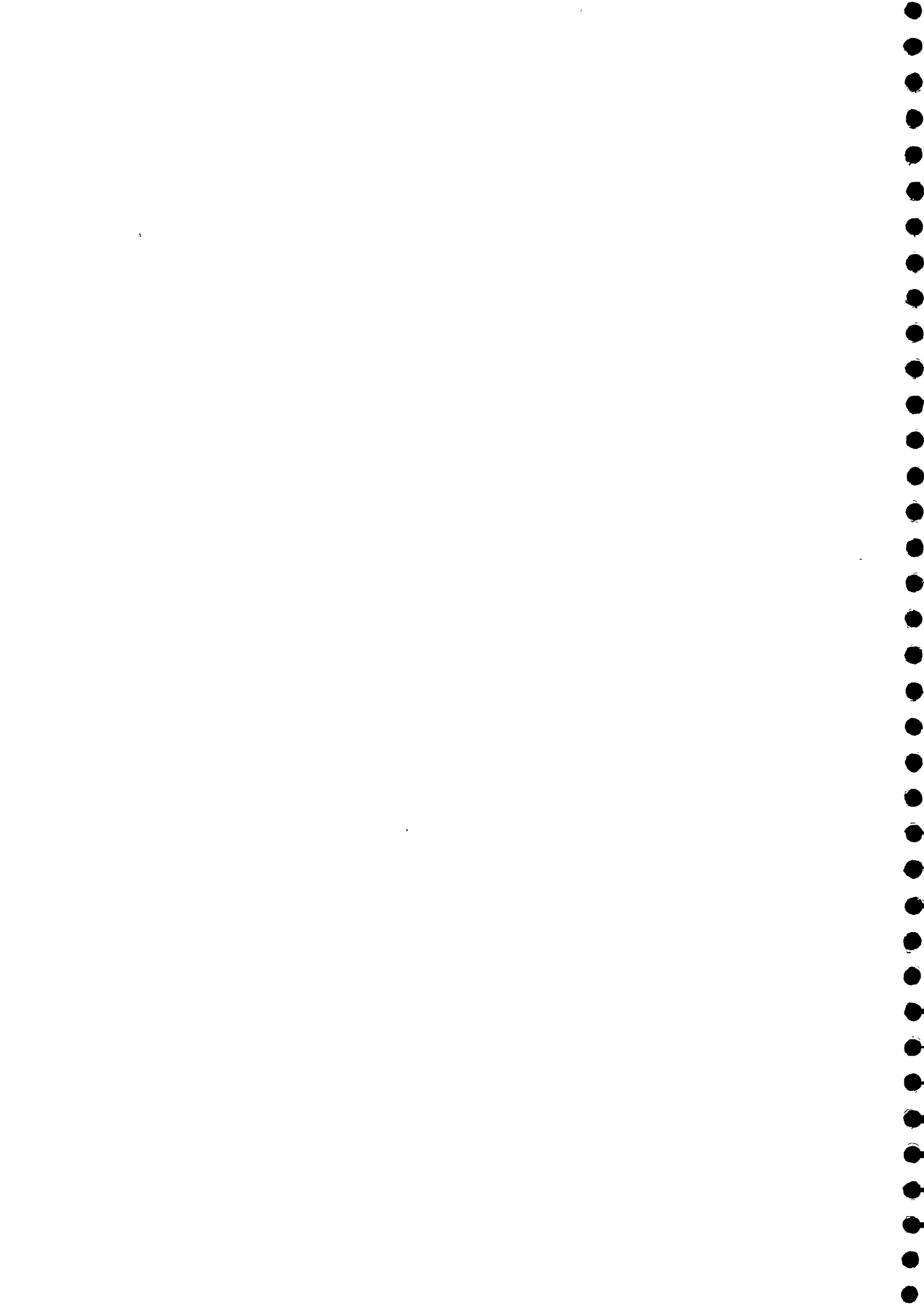
If no, give reasons :

26. Remarks

(Signature of Respondent)

Dated :

(Signature of Interviewer)





प्रश्नावली

केन्द्रीय ग्रामीण जल पूर्ति प्रोग्राम के अध्ययन के लिए

1. केन्द्रीय ग्रामीण जल पूर्ति प्रोग्राम के अन्तर्गत ग्राम का वर्गीकरण स्तर, 1994-98 के बीच वर्षानुसार।

वर्गीकरण स्तर	1994	1995	1996	1997	1998
एफ. सी. (पूर्णतया कवर किया हुआ)	1111	1112	1113	1114	1115
पी. सी. (आंशिक कवर किया हुआ)	1121	1122	1123	1124	1125
एन. सी. (कवर नहीं किया हुआ)	1131	1132	1133	1134	1135

वर्ष 1994-98 के बीच किसी भी समय वर्गीकरण बदल जाने के कारण

कारण	1994	1995	1996	1997	1998
सरकार की उपेक्षा के कारण वर्गीकरण के स्तर का नीचे आना।	1211	1212	1213	1214	1215
ग्रामीण समुदायों की ओर से उपेक्षा या रुचि कम होने से वर्गीकरण के स्तर का नीचे आना।	1221	1222	1223	1224	1225
सरकार या ग्रामीणों के अलावा किसी अन्य के द्वारा उपेक्षा किये जाने के कारण।	1231	1232	1233	1234	1235
वर्गीकरण के स्तर का नीचे आना के अन्य कारण स्पष्ट करें।	1241	1242	1243	1244	1245
सरकार के सकारात्मक प्रयत्न के कारण वर्गीकरण स्तर का ऊँचा होना।	1251	1252	1253	1253	1255
ग्रामीण समुदाय के सकारात्मक प्रयत्न के कारण वर्गीकरण स्तर का ऊँचा होना।	1261	1262	1263	1264	1265
सरकार या ग्रामीण समुदाय के अलावा किसी अन्य (स्पष्ट करें) के प्रयत्नों द्वारा वर्गीकरण स्तर का ऊँचा होना।	1271	1272	1273	1274	1275
वर्गीकरण स्तर के ऊँचा होने के अन्य कारण स्पष्ट करें।	1281	1282	1283	1284	1285

परिवार का विवरण

2. उत्तरदाता का नाम .....

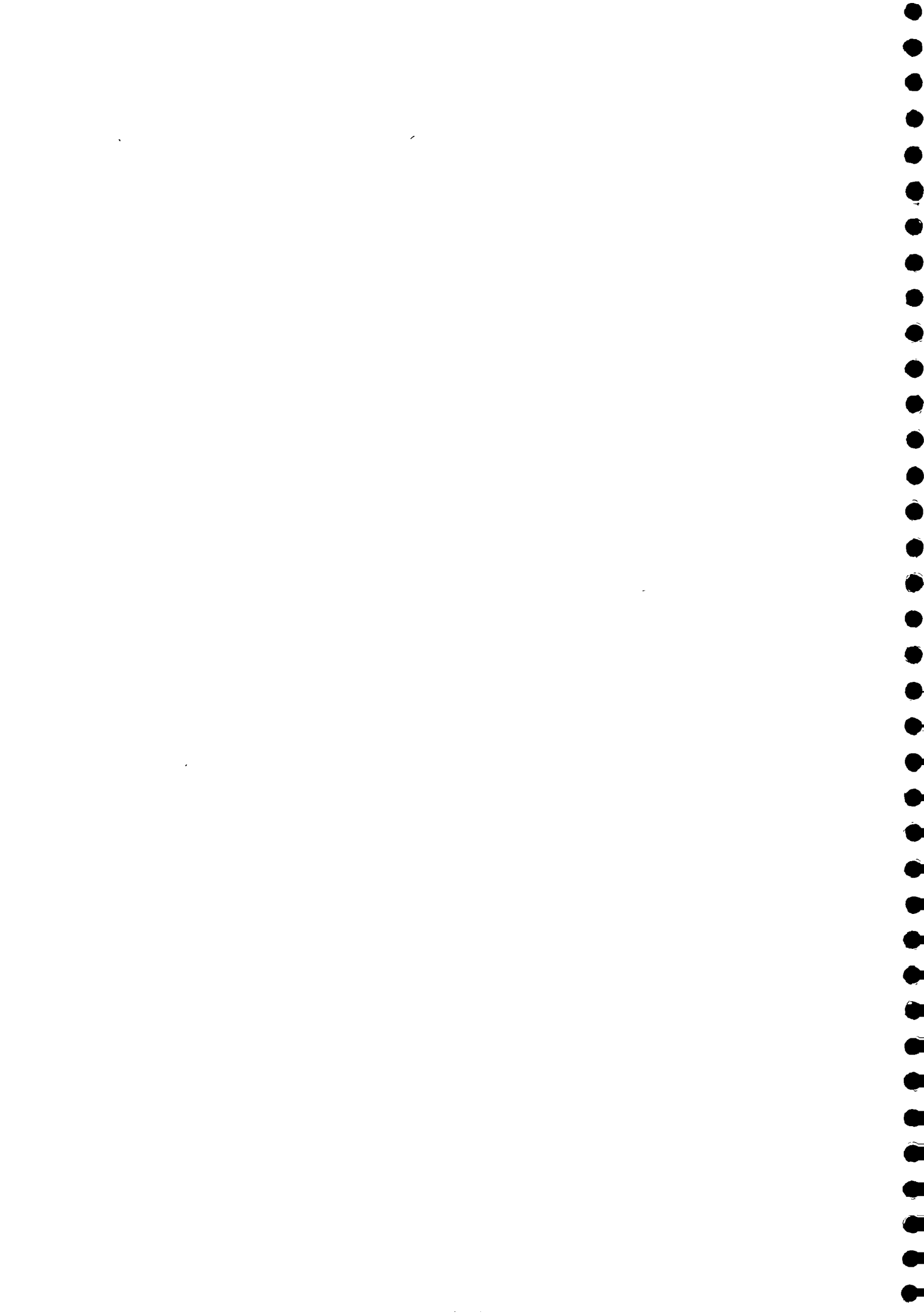
व पता                      ग्राम.....पोस्ट.....  
  ब्लाक.....जिला.....

3. जाति

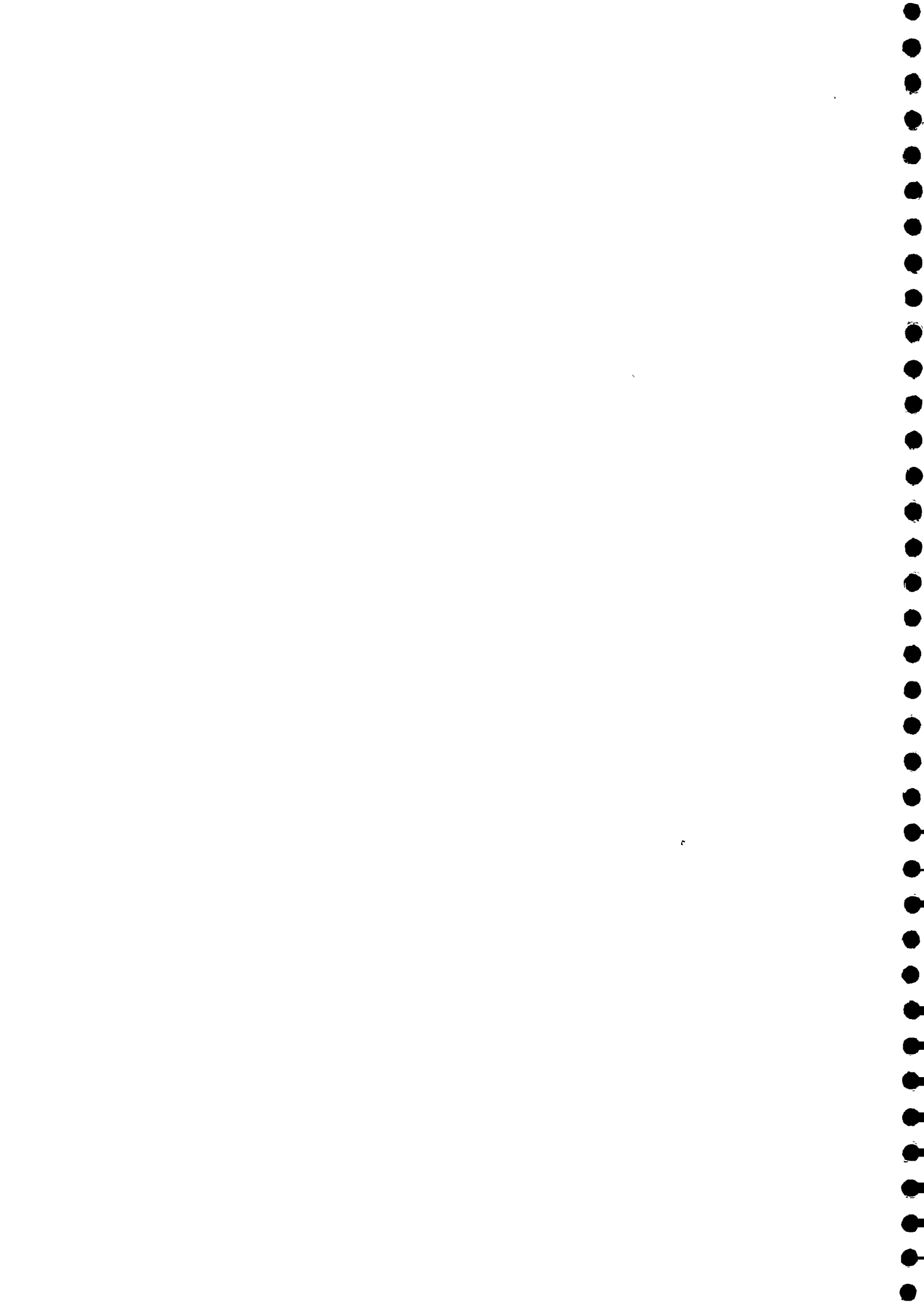
31. अनुसूचित जाति                      32. अनुसूचित जन जाति                      33. पिछड़ी जाति  
34. सामान्य जाति                      35. अन्य स्पष्ट करें

4. परिवार का व्यवसाय

41. किसान                      42. भूमिहीन मजदूर                      43. कारीगर  
44. नौकरी                      45. अन्य (स्पष्ट करें)







10. घर के लिए पानी कौन लाता था

101. केवल स्त्रियाँ                      102. केवल पुरुष  
103. स्त्री व पुरुष दोनों ही

11. पानी लाने के लिए कितना फासला तय करना पड़ता था और कितना समय लगता था

समय	तय किया फासला (मीटर में)					
	50 तक	51 - 100	101 - 200	201 - 500	501 - 1000	1000
111 30 मिनट तक	1111	1112	1113	1114	1115	1116
112 31 मिनट से 45 मिनट तक	1121	1122	1123	1124	1125	1126
113 46 मिनट से 60 मिनट तक	1131	1132	1133	1134	1135	1136
114 61 मिनट से 90 मिनट तक	1141	1142	1143	1144	1145	1146
115 91 मिनट से 120 मिनट तक	1151	1152	1153	1154	1155	1156
116 2 घंटे से अधिक	1161	1162	1163	1164	1165	1166

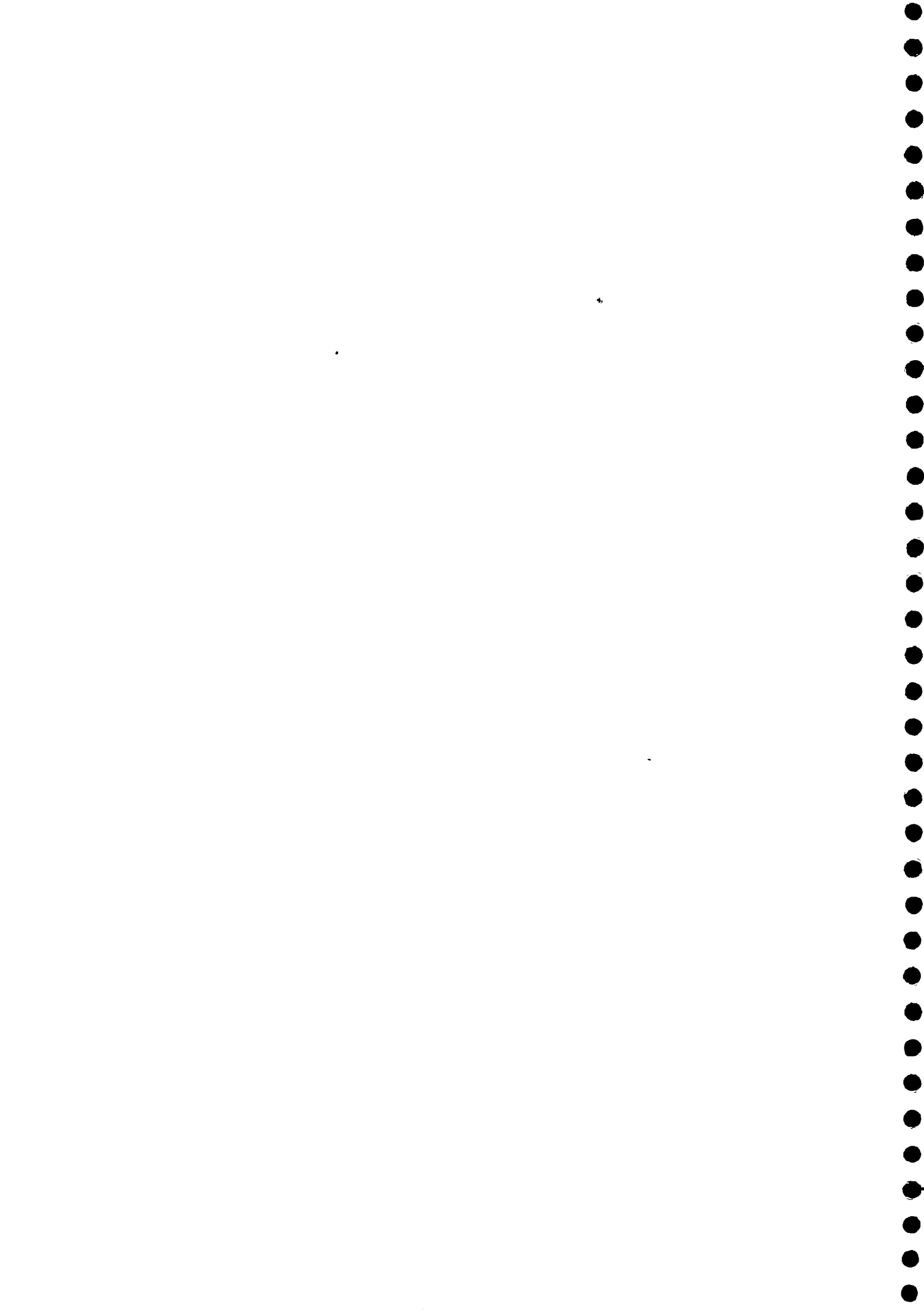
12. सरकारी ग्रामीण जल पूर्ति प्रोग्राम से पहले पानी मिलने संबंधी मुख्य समस्याये क्या थी

121. पर्याप्त मात्रा नहीं मिलती थी।  
122. पानी नियम से नहीं मिलता था।  
123. दूषित पानी मिलता था।  
124. पानी का स्रोत कभी - कभी सूख जाया करता था।  
125. पानी का स्रोत लम्बे फासले पर था।  
126. अन्य स्पष्ट करे

ग्रामीण जल पूर्ति प्रोग्राम के बाद के स्रोतों की औसत समस्याओं का विवरण

13. कितने समय पानी की किल्लत होती है और कितने समय नहीं होती

	अवधि (महीनो में)	पानी की किल्लत होती है।	पानी की किल्लत नहीं होती है
131	1 - 2	1311	1312
132	3 - 4	1321	1322
133	5 - 6	1331	1332
134	7 - 8	1341	1342
135	9 - 10	1351	1352
136	11 - 12	1361	1362

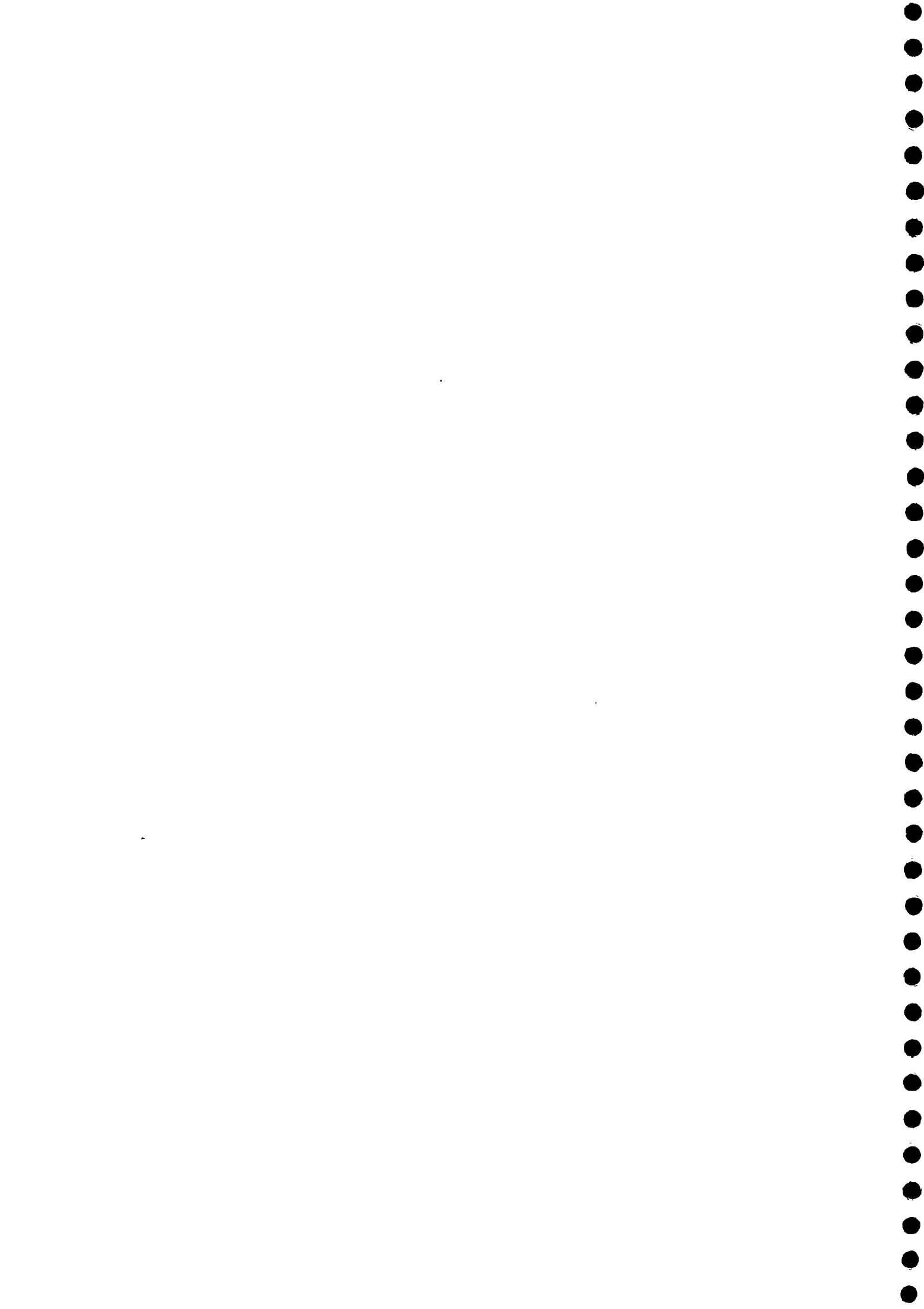


14 वर्तमान में आपको पानी मिलने के कौन - कौन से स्रोत हैं, पानी की गुणवत्ता क्या है, और पानी का स्रोत कितने फासले पर है। गाँव में कुल स्रोतों की संख्या जो कार्यरत तथा बिना कार्यरत है।

स्रोत	गुणवत्ता		कुल स्रोत संख्या	घर का फसला (मीटर में)						
	पीने योग्य।	पीने योग्य नहीं।		कार्यरत।	बिना कार्यरत।	0-5	51-100	101-150	151-200	201-500
1410	सरकारी स्रोत द्वारा पूर्ति।									
1411	हैंड पम्प/स्टैंड पोस्ट	14111	14112	14113	14114	14115	14116	14117	14118	
1412	पाइप से सप्लाई।	14121	14122	14123	14124	14125	14126	14127	14128	
1413	मीटर अनुसार सप्लाई।	14131	14132	14133	14134	14135	14136	14137	14138	
1414	अन्य कोई (स्पष्ट करें)।	14141	14142	14143	14144	14145	14146	14147	14148	
1420	गैर सरकारी निजी पूर्ति।									
1421	समुदाय का कुआ	14211	14212	14213	14214	14215	14216	14217	14218	
1422	खुद का कुआ	14221	14222	14223	14224	14225	14226	14227	14228	
1423	पोंखर	14231	14232	14233	14234	14235	14236	14237	14238	
1424	नदी नहर	14241	14242	14243	14244	14245	14246	14247	14248	
1425	अन्य कोई (स्पष्ट करें)।	14251	14252	14253	14254	14255	14256	14257	14258	

15. वर्तमान में किल्लत के दिनों में व गैर किल्लत के दिनों में आपको कितना पानी मिल रहा है।

किल्लत के दिनों में				(मात्रा लीटर में)	गैर किल्लत के दिनों में			
पीने व खाना बनाने के लिए	नहाने व कपड़े धोने के लिए	पशुओं के लिए	मात्रा लीटर में	पीने व खाना बनाने के लिए	नहाने व कपड़े धोने के लिए	पशुओं के लिए	मात्रा लीटर में	
1501	1502	1503	1504	100	1505	1506	1507	1508
1511	1512	1513	1514	101-150	1515	1516	1517	1518
1521	1522	1523	1524	151-200	1525	1526	1527	1528
1531	1532	1533	1534	201-250	1535	1536	1537	1538
1541	1542	1543	1544	251-300	1545	1546	1547	1548
1551	1552	1553	1554	301-350	1555	1556	1557	1558
1561	1562	1563	1564	351-400	1565	1566	1567	1568
1571	1572	1573	1574	401-450	1575	1576	1577	1578
1581	1582	1583	1584	451-500	1585	1586	1587	1588





19. पानी के स्रोत के संचालन और रख रखाव का खर्चा कौन वहन करता है ?

	कार्यकारी	हैंडपम्प	पाइप से सप्लाई	मीटर अनुसार सप्लाई	अन्य स्पष्ट करे
191	व्यक्ति	1911	1912	1913	1914
192	समुदाय	1921	1922	1923	1924
193	ग्राम पचायत	1931	1932	1933	1934
194	एन० जी० ओ०	1941	1942	1943	1944
195	विशेष गठित कमेटी	1951	1952	1953	1954
196	कोई नहीं	1961	1962	1963	1964
197	पी० एच० ई० डी०	1971	1972	1973	1974
198	अन्य स्पष्ट करे	1981	1982	1983	1984

20. वर्तमान में जो पानी के स्रोत के संचालन व रख रखाव का प्रबन्ध है उसके बारे में आपकी क्या राय है ?

201. सतोषजनक।

202. असतोषजनक।

यदि प्रबन्ध असंतोषजनक है तो इसके क्या कारण हैं ?

221. ट्रेड व्यक्तियों का उपलब्ध न होना।

222. पर्याप्त धन का उपलब्ध न होना।

223. लोगो का अपना निर्धारित हिस्सा अदा न करना।

224. अन्य कोई स्पष्ट करे।

225. संचालन व रख रखाव की जिम्मेदारी निर्धारित न होना।

21. पानी के स्रोत के कार्यशील होने की क्या स्थिति है ?

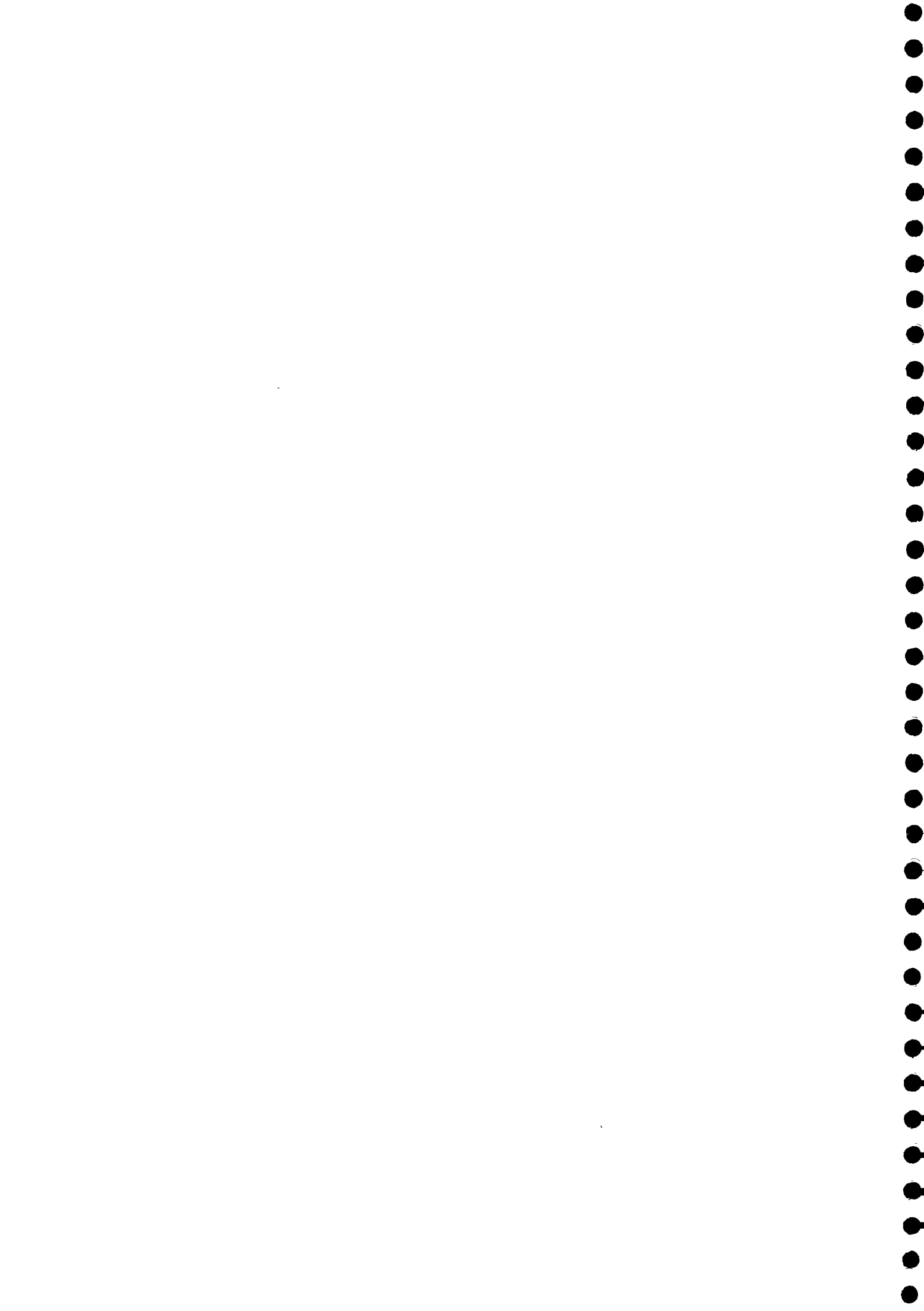
	हैंड पम्प	पाइप से सप्लाई	मी० अनुसार सप्लाई	अन्य स्पष्ट करे
211. ठीक से काम कर रहा है	2111	2112	2113	2114
212. ठीक से काम नहीं कर रहा है	2121	2122	2123	2124
213. काम ही नहीं कर रहा	2131	2132	2133	2134

213. अगर बिल्कुल काम नहीं कर रहा तो कितने दिनों से काम नहीं कर रहा अवधि बताये।

अवधि	हैंड पम्प	पाइप से सप्लाई	मी० अनुसार सप्लाई	अन्य स्पष्ट करे
- पिछले 2 - 3 दिन से	21311	21312	21313	21314
- पिछले एक सप्ताह से	21321	21322	21323	21324
- एक पखवाड़े से	21331	21332	21333	21334
- 1 महीने से	21341	21342	21343	21344
- 2 महीने से	21351	21352	21353	21354
- 2 महीने से ज्यादा	21361	21362	21363	21364

22. पानी का स्रोत कितने समय में खराब हो जाया करता है ?

अवधि	हैंड पम्प	पाइप से सप्लाई	मी० अनुसार सप्लाई	अन्य स्पष्ट करे
हफ्ते में एक बार	2211	2212	2213	2214
पखवाड़े में एक बार	2221	2222	2223	2224
महीने में एक बार	2231	2232	2233	2234
दो महीने में एक बार	2241	2242	2243	2244
तिमाही में एक बार	2251	2252	2253	2254
साल में एक बार	2261	2262	2263	2264
दो साल में एक बार	2271	2272	2273	2274
अन्य स्पष्ट करे	2281	2282	2283	2284



16. पाइप के पानी/मीटर अनुसार पानी की आपूर्ति कितनी बार होती है

	अवधि (घंटों में)	किल्लत के दिनों में	गैर किल्लत के दिनों में
161	सुबह		
	1-2	16111	16112
	3-4	16121	16122
	5-6	16131	16132
	अन्य कोई स्पष्ट करे		
162	शाम		
	1-2	16211	16212
	3-4	16221	16222
	5-6	16231	16232
163	पूरे दिन	16311	16312
164	अन्य कोई स्पष्ट करे	16411	16412

17. सरकारी ग्रामीण जल पूर्ति प्रोग्राम के बाद भी क्या आपको पानी मिलने की समस्या है ?

171 हॉ 172 नहीं

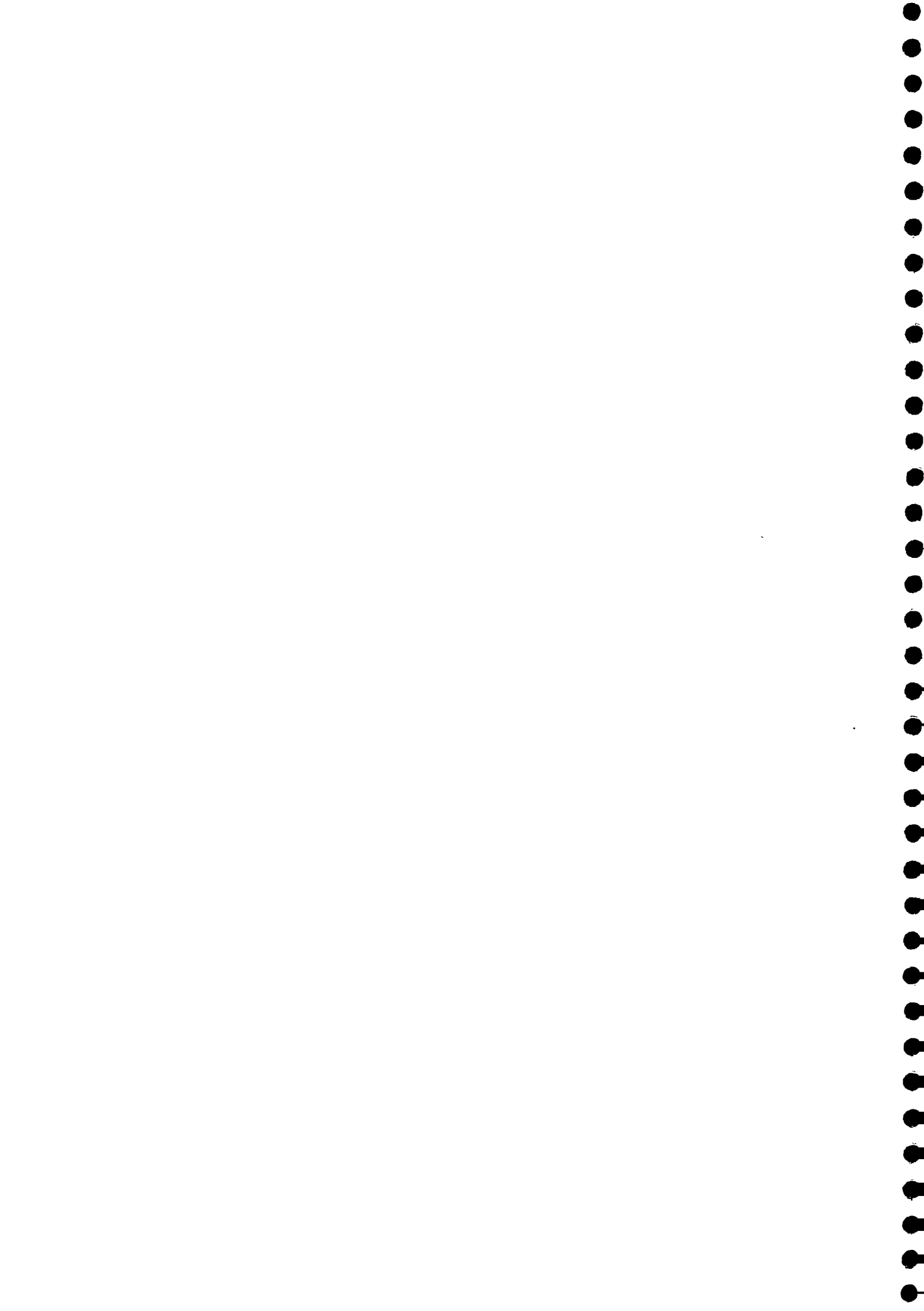
यदि हॉ तो समस्या किस प्रकार की है:-

- 1711 पर्याप्त मात्रा नहीं मिलती।  
 1712 पानी की सप्लाई रोजाना अनियमित रहती है।  
 1713 दिन में पानी की सप्लाई अनियमित रहती है।  
 1714 अस्वच्छ पानी उपलब्ध होता है।  
 1715 पानी का स्त्रोत सूख जाता है।  
 1716 पानी का स्त्रोत लम्बे फासले पर है।  
 1717 सब समुदाय के लोग कभी पानी स्त्रोत से पानी नहीं ले सकते है।  
 1718 सब समुदाय के लोग कभी-कभी पानी स्त्रोत से पानी ले सकते है।  
 1719 अन्य कोई स्पष्ट करे

पानी के स्त्रोत का संचालन व रख रखाव

18. पानी के स्त्रोत के संचालन व रख रखाव की जिम्मेदारी किसकी है?

	कार्यकारी	हैडपम्प	पाइप से सप्लाई	मीटर अनुसार सप्लाई	अन्य स्पष्ट करे
181	व्यक्ति	1811	1812	1813	1814
182	समुदाय	1821	1822	1823	1824
183	ग्राम पंचायत	1831	1832	1833	1834
184	एन० जी० ओ०	1841	1842	1843	1844
185	विशेष गठित कमेटी	1851	1852	1853	1854
186	कोई नहीं	1861	1862	1863	1864
187	पी० एच० ई० डी०	1871	1872	1873	1874
188	अन्य स्पष्ट करे	1881	1882	1883	1884



23. पानी के स्रोत के खराब हो जाने का मुख्य कारण क्या है?

अवधि	हैन्ड पम्प	पाइप से सप्लाई	मी० अनुसार सप्लाई	अन्य स्पष्ट करे
दोषपूर्ण सस्थापन	2311	2312	2313	2314
घटिया सामान लगा होना।	2321	2322	2323	2324
गलत तरीके से इस्तेमाल होना	2331	2332	2333	2334
प्राकृतिक आपदा के कारण नुकसान	2341	2342	2343	2344
दुष्ट लोगो द्वारा नुकसान।	2351	2352	2353	2354
पार्टस की चोरी होना।	2361	2362	2363	2364
अन्य स्पष्ट करे	2371	2372	2373	2374

24. पानी की सप्लाई जैसे पाइप से सप्लाई, पर्याप्त और नियमित रूप से होने के लिए इस पर आया खर्चा किसको वहन करना चाहिए ?

सस्था/व्यक्ति	सस्थापन की पूजीगत लागत	संचालन व रख-रखाव लागत
241. सरकार	2411	2412
242. पंचायत	2421	2422
243. एन० जी० ओ०	2431	2432
244. संयुक्त रूप से सरकार व पंचायत द्वारा	2441	2442
245. स्वयं/समुदाय द्वारा	2451	2452
246. पी० एच० ई० डी०	2461	2462
247. अन्य कोई स्पष्ट करे	2471	2472

25. यदि स्वयं/समुदाय द्वारा संस्थापन का व संचालन एवं रख-रखाव का खर्चा वहन करना चाहिए तो किस सीमा तक वहन करना चाहिए व हिस्सेदारी का क्या स्वरूप होना चाहिए ?

**हिस्सेदारी का स्वरूप**

2501	हर घर का समान हिस्सा	2502	हर घर में सदस्यों की संख्या के अनुपात से हिस्सा
2503	हर घर में पानी की लागत मात्रा के अनुपात से हिस्सा		

**सीमा (रु० प्रति महीना)**

2511	0-20	2512	21-40	2513	41-60
2514	61-80	2515	81-100	2516	> 100

26. क्या आपने पूजीगत लागत (पानी स्रोत के लिये) में योगदान किया है।

261	हाँ	262	नहीं
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यदि हाँ तो कितना

2611	100 रुपये से कम	2612	101 से 300 रुपये
2613	301 से 500 रुपये	2614	501 से 1000 रुपये
2615	1000 रुपये से अधिक		

