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**MINISTRY OF LAND RECLAMATION, REGIONAL
AND WATER DEVELOPMENT, KENYA**

MINISTRY FOR FOREIGN AFFAIRS, FINLAND

**KENYA-FINLAND
WESTERN WATER SUPPLY PROGRAMME**

TRANSFER PLAN

19 October, 1994



KEFINCO

HELSINKI, FINLAND
KAKAMEGA, KENYA

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PHASE IV

TRANSFER PLAN

19 October, 1994

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KENYA-FINLAND WESTERN WATER SUPPLY PROGRAMME, Phase IV
TRANSFER PLAN,

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ABBREVIATIONS AND ACRONYMS

| | |
|----------------|--|
| AET | - Adult Education Teacher |
| CDA | - Community Development Assistant |
| CWS | - community managed water supplies |
| DB | - District Base |
| DDA | - demand driven approach |
| DWE | - District Water Engineer |
| DWEO | - District Water Engineer's Office |
| DWO | - Divisional Water Officer |
| FINNIDA | - Finnish International Development Agency |
| KEFINCO | - |
| KES | - Kenyan shilling (FIM 1 = KES 10.9920, July 20, 1994) |
| KFWWSP | - Kenya Finland Western Water Supply Programme |
| km | - kilometre |
| Mb | - megabyte |
| MBR | - Management By Results |
| MOCSS | - Ministry of Culture and Social Services |
| MOLRRWD | - Ministry of Land Reclamation, Regional and Water Development |
| MWS | - Ministry managed water supplies |
| NGO | - non-governmental organization |
| NWCPC | - National Water Conservation and Pipeline Corporation |
| PWE | - Provincial Water Engineer |
| PWEO | - Provincial Water Engineer's Office |
| RAM | - random access memory |
| RDF | - Rural Development Fund |
| RGS | - river gauging stations |
| STW | - station wagon |
| UWUA | - umbrella water users association |

INTRODUCTION

The Transfer Plan presents the main activities carried out by the KFWWSP and how they will be integrated to the various organizations. It has been prepared for:

- i "internal use" to summarize water development activities and responsibilities of the parties involved
- ii the competent authorities to inform them how the responsibilities of the Programme will be transferred to the various organizations
- iii monitoring the actual activities, duties and responsibilities
- iv future planning, especially Chapter 4 presents how the Programme sees the water development in Western Province in future.

Some responsibilities have already been transferred and some vehicles and tools have been handed over to the MoLRRWD. This Transfer Plan gives comprehensive guidelines for the entire transfer process. The Transfer Plan consists of four parts:

- i general presentation of the KFWWSP, objectives of the Consolidation Phase during which the duties and responsibilities will be transferred
- ii description of duties and responsibilities of all parties involved
- iii handing over and disposal of vehicles, tools, equipment and materials
- iv and the plan on implementation and financing the water supply development after the Programme has been completed.

Presently "the National Water Supply Policy Paper" on the national water development strategy is under preparation in the MoLRRWD. When the policy has been approved it may effect on the development plan proposed by the Programme and the appropriate revisions and amendments, especially regarding the Chapter 4, will be done accordingly.

AMENDMENT TO THE TRANSFER PLAN of 19th October 1994

The following amendments will be included in the Transfer Plan:

Page 8

The random tests of water quality in water points should be performed regularly for monitoring purposes instead of limiting them to emergency cases only.

Page 9

Test Pumping has already been performed on all completed wells. Test pumping data and results should be properly recorded and the documents retained for reference purposes.

Page 9

Contract records on all construction projects implemented through contract arrangements should be prepared and handed over to the Director of Water Development.

Page 11

Any surplus office space/facilities in District Base premises should be rented out to attract revenue and should not be disposed off.

Page 14

The Concrete Laboratory should revert to the PWE/Western Province and used for materials testing and quality assurance as and when required. The facility may also be hired by outsiders on commercial basis to attract revenue.

Page 15

Both Drilling Rigs with complete tools and equipment should be handed over to the Ministry and incorporated into the ministry's drilling activities which are now operating on commercial basis except in special and very deserving circumstances.

Page 16

The unserviceable Sea Containers should be disposed in the same manner as the unserviceable Programme assets. However, in all circumstances, the disposal should follow the laid down regulations.

Page 16

Any surplus office facilities at the main yard should be rented out, not allocated to other ministries. Other ministries/departments would get first priority in such circumstances.

Page 16

All Pipes, Screens and Casings in the programme stores should be retained in the Ministry for use on operation and maintenance and installation in new projects within the Western Province.

Page 17

Each district should be provided with a PC and accessories whereas the PWE/Western should be provided with a larger computer to serve the main programme database after 1995. The old computers will be replaced by the new ones in accordance with funds available.

1 BACKGROUND INFORMATION OF KFWWSP

The Kenya–Finland Western Water Supply Programme (KFWWSP) was started in February, 1981, jointly funded by the Kenyan and Finnish governments. The fourth phase started being implemented on 1st of May 1993 and will be completed at the end of 1995. The Ministry of Land Reclamation, Regional and Water Development (MoLRRWD) of Kenya and the Ministry for Foreign Affairs of Finland, through FINNIDA, have employed KEFINCO to carry out implementation of the fourth phase.

The Programme area, in the first three phases covered the whole of Busia district, parts of Kakamega and Bungoma district in Western Province, Ugunja and Ukwala divisions from Siaya district in Nyanza Province. The total area covered in the three phases was approximately 5230 Km². In the fourth phase, the Programme covers Busia, Bungoma, Kakamega, Mt. Elgon and Vihiga Districts of Western Province with an area of about 7,400 km² and a total population estimated to be about 3.0 million people in 1993. In addition, some activities were carried out in the early part of the phase in Ukwala and Ugunja divisions, to facilitate phasing out of the Programme by the end of 1993.

The overall objective of the Programme Phase IV is to support the Kenyan Government's efforts to provide the population with safe and adequate supply of potable water for better health, improved standard of living and better economic opportunities. In the Programme area the more specific long term development objectives are:

- to consolidate the water supply situation in the area already covered by earlier phases of the Programme so as to ensure sustainable functioning of the present water supplies
- to encourage continuing development of new water supplies using the demand driven approach and to improve the water supply situation in Western Province in a sustainable manner
- to clarify the roles of various Programme partners, public sector, private sector and consumers in the water sector development and strengthen the role of public institutions, in particular MOLRRWD, in promoting, supporting and supervising sector activities.

During the first three phases, a supply driven approach was used. This was found to be unsustainable and was changed to a demand driven approach (DDA) in line with the recommendation presented in the Project Document for the Phase IV. The role of Kenyan line organizations will be emphasized. Activities will be mainly carried out using the staff in the various Ministries and in the Programme. Also private contractors and consultants will be used actively.

The demand driven approach (DDA) will be used to implement the activities during the fourth phase. In this approach, the benefiting water users will contribute both in materials, labor and cash for development of their water supplies. In addition, the beneficiaries will be involved in decision making on choice of technologies. After development of the water facility they will take the responsibility for operational management. This approach will lead to more sustainable water supplies in the long run.

2 OBJECTIVES OF PHASE IV

The Project Document gives three major objectives for the Phase IV, out of which the following four key results were developed:

1. **Communities are managing their water points producing enough water of acceptable quality**
2. **Operational level of piped schemes secures continuous water supply to consumers in a financially self sustaining manner**
3. **The roles and responsibilities of water and sanitation sector partners are clarified and strengthened**
4. **Demand driven approach is developed and in use facilitating the development of new water supplies in future**

When the above key results are achieved, it is expected that the developed water supplies will be sustainable and procedures for new water supplies will be replicable. The major responsibility for water development rests with the local authorities such as DWEO, communities and water users.

3 INSTITUTIONAL ARRANGEMENTS AND CONSOLIDATION OF PROGRAMME ACTIVITIES

3.1 ROLE AND RESPONSIBILITIES OF DISTRICTS

The main target is that all activities related to regional water development and activities under the responsibility of the MOLRRWD will be executed through the District Water Engineers Offices (DWEO) under Provincial Water Engineer's (PWE) control and supervision.

The duties of Provincial and District Water Engineers as given by the Permanent Secretary, Ministry of Land Reclamation, Regional and Water Development are the following:

The Provincial Water Engineer is representative of MLRR&WD in the province and responsible for development, maintenance, control and supervision of all water related matters in the province.

The District Water Engineer is the representative of the MLRRWD in the district and responsible for the overall planning, control and management of all water related matters in the district including financial management.

The organization charts with job descriptions of the DWEOs are shown in Appendix 1

Due to the nature and scope of KFWWSP, there are areas where collaboration with other sector partners will be required. Some of the areas include community mobilization which will be spearheaded by the Ministry of Culture and Social Services in collaboration of the provincial administration.

Water committee

There are over 3,700 water points in the region managed by water committees on behalf of the users. In addition there are 14 community piped water supplies managed by water committees. These committees will continue to manage the aforementioned water supplies. In cases where the water supplies require upgrading the committee will be expected to take the initiative.

Other organizations

There are other organizations who are active in water development in the region. These include other government departments, non governmental organizations (NGOs) and other external support agencies. Their activities and contribution compared to the Programme activities have been very limited. These organizations will be encouraged and expected to continue their water development efforts in the region.

3.1.1 TRANSFER OF ACTIVITIES AND RESPONSIBILITIES

Planning and design activities

The Programme has been carrying out design work for the projects under its responsibility. However, since the beginning of 1993, most of the design work is carried out in the district supported by the Programme. By the mid 1994, most of the design work for the projects to be implemented by the Programme will be completed. It is noted here that since 1994 all the staff in planning office are from the MOLRRWD. If the DWEO does not have planning capacity enough, it is recommended to use the services of private consultants through the government procedures.

The preparation and updating of Water Supply Development Plan for Western Province will be done as part of the District Development Plans. The preparation of these plans is the duty of planning unit in each district and the District Water Engineer is a unit member.

The office of the Provincial Water Engineer will continue to supervise and give support where needed.

Water quality monitoring

Over the years, there has been implemented a large number of water supplies, especially water points. Water point technology was new in the area and therefore an extensive monitoring system was necessary. In this connection a water testing laboratory equipped with the appropriate testing equipment was established in Kakamega next to the PWEO. The equipment and the tests which can be carried out in the laboratory is given in Appendix 6.

The provincial laboratory will also serve as Kakamega district laboratory as a referral laboratory for the other districts and as a training venue for the District Water Chemists, the Chemical Attendants and the Water Treatment Plant Operators. The provincial water laboratory will be implementing also environmental monitoring by analyzing waste water samples. Appendices 6 show that the equipment and the tests carried out in the Kakamega laboratory are more comprehensive than in the district laboratories.

In order to decentralize the water quality monitoring to the district in accordance with the existing policy, a water laboratory will be established in each district (Busia, Bungoma and Vihiga). The equipment and the tests which can be performed in the district laboratories are given in Appendix 6. The new laboratories will be established by the end of 1994. In order to generate some income to cover the recurrent costs it is proposed that the water laboratories will sell their services. The annual budget for each laboratory will be prepared by the Head of the Laboratory.

The staff in the Kakamega laboratory are well qualified and sufficient in number to run the laboratory. There are already qualified technologists in the District Water Engineers offices to run the new laboratories.

Water treatment plants and other water supplies should get their samples to be analyzed regularly once a month. Water supplies must control the water quality at the intake and at the possible treatment plant regularly in accordance with the procedures.

Water quality in the water points will be checked only randomly and when there have been complaints or disease outbreaks around the water point. Water samples are then collected by DWEO's staff. If the DWEOs have the resources and the capacity for monitoring they can do that also periodically.

Health education for the communities and water users will be given on water quality issues till the end of 1995.

Ground water investigation

The KFWWSP has been carrying out ground water investigation for both boreholes and hand dug wells constructed with the support of the Programme. From 1993, all the ground water investigations in the districts have been carried out by the District Geologists. The programme has been giving support and also training in the use of seismic equipment and computer

interpretation. However, the Provincial or District Water Engineers should assign personnel to be trained and licensed to carry out blustering.

Test pumping of completed wells has been carried out by the Programme. There is a need to have staff from the Provincial Water Engineers office trained in the use of the equipment to facilitate handing over. On-the-job-training will take place during the second half of 1994.

The ground water investigation including test pumping will be handed over to the districts by end of 1994. The PWE office will coordinate and supervise the activity making sure that the equipment are allocated equally according to the need. The equipment in Appendix 7 will be handed over to the PWE by the end of 1995. Each district will be provided with a set of auger drilling equipment by August 1994.

Ground water monitoring

Ground water monitoring has continued based on a network comprising of 11 observation boreholes, 37 hand dug wells and 11 springs. Monitoring of the ground water is necessary considering the large amount of ground water extraction in the region. Monitoring of ground water will be handed to the District Geologists during 1995.

Hydrology Monitoring

The Monitoring and Hydrology Section was established during the Phase IV of the Programme. The section is headed by a hydrologist who is also the Provincial Hydrologist in the PWE's office. As far as hydrology activities are concerned the section uses the staff of the DWEO's. In each district there is a Hydrology Unit headed by a Hydrologist. The Programme has been supporting the unit in terms of transport. In April 1994, the Programme purchased a discharge measuring equipment for the section (a current meter) which will be handed over to the PWEO at the end of 1995. The rehabilitation of River Gauging Stations (RGS) was postponed to early 1995. The head of Monitoring and Hydrology Section also acts as the System Analyst for the Programme.

The Programme's support in all monitoring activities has been remarkable. If the ministry's development budget remains on the actual level it may hamper the monitoring activities.

Construction projects

Selection of contractors and supervision of construction works in piped water supplies will be carried out through "the Engineer" (DWE). The DWE will nominate a site supervisor for each construction site. It is recommended that Divisional Water Officers (DWO) will be in charge of supervision since the Programme is not able to pay any accommodation expenses or night outs for supervisors. The overall responsibility of the works will remain on the Employer, KFWWSP, till the end of 1995, i.e. the instructions to the contractors and the other matters with respect to the contracts are managed through the Programme.

Supervision the construction of water points will be carried out through the DWEs. The DWEO will nominate one or two site supervisors. The supervisor is nominated for each 15 ongoing construction site. The Programme will remain as the Employer of the contracts through the DWEO. The Programme will have the overall responsibility till the end of 1995 of production coverage and quality of works.

For all construction projects it is recommended that a retention money of 10 % of the contract value is retained by the contracting agency, which has been the KFWWSP. The retention money will be released and returned to the contractor after the final inspection and approval of the works after one year's guarantee period.

The KFWWSP proposes that in the future retention money will be deposited in the Owner's (community, institution, private person) bank account. The DWEO will arrange the final inspection and give recommendation to release the retention money. In case of the Ministry water supplies it is proposed that a separate bank account will be opened for the retention money under the control of DWE.

Community Involvement (Community Coordinators/CDA's/AET's)

The District Social Development Offices should nominate Social Development Assistants to carry out the duties and responsibilities of District Community Coordinators. All other community activities of KFWWSP will be incorporated or integrated in the same office. If the District Social Development Office could not identify a person, the DWEs should appoint an officer to manage the community activities in the District after 1995.

In the Districts where there is a Ministry staff as a community coordinator e.g. in Bungoma, the personnel should continue carrying out these functions. In Vihiga the community coordinator is from the District Social Development Office, and the KFWWSP proposes that he will continue with the support from the MOLRRWD, e.g. regarding to transport as this seems to be a problem. moment.

By the beginning of July, 1994, all directly employed extension workers' contracts will expire. All locations will be monitored by either Community Development Assistants (CDAs) or Adult Education Teachers (AETs) under the supervision of the community coordinators and the District Social Development Office. In most areas CDAs and AETs taking over the duties are already working together with the directly employed staff.

Programme Involvement

The Programme will continue to give technical assistance to the relevant parties as may be deemed necessary after 1995. In the workshop on June 28, 1994 regarding the transfer plan that was attended by the PWE, DWEs and the KFWWSP management it was seen unanimously that the supporting activities and monitoring would be important still after 1995.

3.1.2 DISTRICT BASES

Siaya

Siaya District Base at Ugunja with its moderate workshop, offices and stores including the materials for 20 handpumps were handed over to the DWE, Siaya, on November 1993. The KFWWSP will only follow up the water supply development in Siaya District through the bimonthly meetings at Ugunja till the end of 1995. Some assistance in the form of advices, training, etc. will be given if deemed appropriate.

Bungoma and Busia

The same procedure will be followed in Bungoma and Busia District Bases. Buildings, stores, machinery and equipment in Bungoma District Base will be handed over in the end of June 1994 and in Busia in the end of 1994. Detailed handing over plan for Bungoma is shown in Appendix 4.

Kakamega

The KFWWSP's office compound consists of 39 offices, a drawing office, a conference room, archives, service rooms, stores and other office facilities. The compound is large enough to offer facilities also to the staff of the Kakamega District Base. Already now one part of the offices are occupied by the staff of the NWCPC. The KFWWSP also assume that the MoLRRWD doesn't need the stores at Kakamega District Base. The store capacity at KFWWSP is also adequate for the of DWE and PWE. Therefore it is recommended that the staff will move to the KFWWSP office compound and the District Base premises will be rent out or sold if the Government regulations on fixed assets allows this. The Programme will phase out its activities from the Base in the end of 1994. The proposal on use of offices presented in Appendix 3.

The estimated revenue for the selling of the DB is shown in Appendix 11.

It has already been agreed that in future, the activities in the Kakamega District Base's workshop will be transferred to the PWEO.

3.2 PERSONNEL

3.2.1 MINISTRY STAFF

There are currently 173 employees from the MOLRRWD and the Ministry of Culture and Social Services attached to the programme. In the programme's main office in Kakamega there are 55 officers, and 118 have been located to the District Water Engineer's offices. The organization charts for the DWEs' staff will be ready by the end of June, 1994. The respective job descriptions will be prepared by the DWEs by the end of July, 1994. When the personnel is attached to the Programme, they will be paid allowances, nightouts etc. till the end of 1995.

The ministry's staff is serving on the Programme in various capacities ranging from heads of departments, to a large extent as heads of sections, co-ordinators, heads of units, technicians and supporting staff. This gives a suitable set-up for the transfer plan. However, the transfer plan for the Ministry's personnel attached to the Programme will largely depend on activities and responsibilities to be carried out from 1996 onwards. It will also be necessary to plan for the re-deployment of this staff for the smooth transition of the Programme and future sustainability of the activities.

3.2.2. PROGRAMME STAFF (directly employed)

The number of Programme employees is currently 122. The transfer of activities and responsibilities to the Districts, the reduction of programme activities, and the use of private consultants and contractors, will reduce the number of the directly employed staff to 72 by the end of 1994. The detailed plan is presented in Appendix 2.

3.3 WORKSHOPS AND STORES

The main target is to decentralize all activities to the district workshops which have resources for basic repairs and service. Vehicles and equipment will be handed over in such a condition that they fulfil the inspection requirements when the DWEOs are able to meet the service and running costs of the vehicles. Rest of the vehicles, equipment and tools may be sold through open tendering.

Sharing of the maintenance responsibilities is described and expected costs for the nearest future are given, based on the cost records kept by the Programme. Technical assistance is readily available during the Programme. Possible assistance in repairs/maintenance for the handed over vehicles has to be carefully considered case by case.

The KFWWSP strongly recommends that the Ministry reserves reasonable funds for the running maintenance costs of these vehicles. Assistance in budgeting is available from the Programme's cost records. When vehicles become unserviceable, it is highly advisable to enhance the "transport pool" thinking and get smoothly away with the costly vehicles, before they get grounded. Alternatively they can be dismantled into spare parts. The PWE should investigate various options on how to run the Gok workshops in a self-sustainable way.

3.3.1 CONSOLIDATION OF WORKSHOP ACTIVITIES

Motor vehicle workshop and mechanical store

Vehicles

Presently (May 1994), the Programme has 57 vehicles and 42 motorbikes. By the end of 1995, the Programme has to dispose of all them either by handing over to the Ministry, writing off (scrapping) or selling them out.

Construction and rehabilitation of water supplies is the main activity of the Programme. Therefore, the vehicles used by the Technical Department of the KFWWSP will be the last ones to be handed over to the Ministry. The same applies to the activities of the Community and Training Department, because of the extensive community work needed for demand driven approach. General administration has the least daily inter-activities with the Programme. Therefore, the vehicles used by the DWEs and PWE are the first ones to be handed over to the Ministry.

In order to ascertain efficient use of remaining vehicles, most of the vehicles will be moved to the transport pool. Similar "pool" thinking will be implemented at the district level. However, to the extent possible, each vehicle and motorbike should have only one driver.

Handing over schedule for vehicles and motorbikes is shown below:

| <u>Time</u> | <u>Vehicle</u> | <u>Reg.no.</u> | <u>To be stationed at</u> |
|-------------|-------------------------------------|----------------|---------------------------|
| July-93 | L/Rover STW | KDW 462 | DWE - Busia |
| | L/Rover STW | KDW 471 | DWE - Kakamega |
| | L/Rover STW | KDW 472 | DWE - Bungoma |
| | L/Rover STW | KDW 479 | DWE - Siaya |
| Jan-94 | Subaru STW | KDW 447 | PWE - Kakamega |
| | L/Rover STW | KDW 424 | DWE - Mt.Elgon |
| Jan-94 | Suzuki TF125 | KWK 728 | DWE - Bungoma |
| | Suzuki TF125 | KXV 791 | DWE - Busia |
| | SuzuKAC 557R) | | |
| End-94 | All Planning & Design Dep. vehicles | | |
| Mid-95 | All remaining motorbikes | | |
| End-95 | All remaining vehicles | | |

Maintenance and running costs

After handing over, the Ministry will service the vehicles at their premises in the districts. This will be done by their own mechanics. Major repairs will be carried out at the provincial central workshop in Kakamega. Specialized jobs can be contracted out.

The KFWSSP continues giving technical assistance till the end of 1995. After handing over of any specific vehicle, a period of two months of close co-operation will follow. This will in practice cover the re-registration period. After this period the Ministry will be solely responsible for the vehicle maintenance.

The total operating cost for a vehicle depends directly on the driven mileage. The cost estimates given below are based on, the average use of vehicles in the Programme.

The cost and mileage averages from 1993 for the various vehicle groups are presented below. Local prices for spares went up considerably in the beginning of 1993, but stayed rather stable since then. For budgeting purposes, the costs are expected to increase in 5% every six months.

It is important to keep in mind that around 60% of spares and materials have been imported duty-free. However, the share of spare part costs in each vehicle group is different.

Vehicles' running costs in 1993 (KES)

| Vehicle type | cost/km | km/month | cost/month | km/year | cost/year |
|--------------|---------|----------|------------|---------|-----------|
| L/Rover | 8.13 | 3,000 | 24,390 | 36,000 | 292,680 |
| Subaru | 6.09 | 3,000 | 18,270 | 36,000 | 219,240 |
| Isuzu 2.5t | 6.80 | 3,000 | 20,400 | 36,000 | 244,800 |
| Lorry 7t | 21.01 | 3,000 | 63,030 | 36,000 | 756,360 |
| Tractor | n/a | | 11,333 | | 136,000 |
| M/bike | n/a | | 3,929 | | 47,151 |

Note: Rig is reported separately, see Appendix 9.

Training

There has been arranged special training for vehicle mechanics (two mechanics for two months from each district) in the programme workshop. However, there may still arise a need for practical on-the-job training for the Ministry's mechanics, working in the districts.

Follow-up for the training in the districts will be carried out by the Programme's Assistant Foremen during 1994. If needed, more on-the-job training will be arranged in Kakamega.

Other workshops

All the appropriate activities in the workshops at Kakamega District Base are going to be transferred into the main workshop of Provincial Water Engineer's Office (PWEO) at the end of 1994. Thus in future PWEO's workshop is having only the space where mechanical workshop and pump and meter testing units are presently.

The most important activity to be accommodated from Kakamega District Base into the PWEO's workshop is the concrete laboratory. Testing of construction materials should be quite an important part of PWEO's duties when controlling and supervising water supply construction in Western Province.

The repairs, meter calibrations, manufacturing of spares etc. activities implemented at PWEO's workshops are all to be paid for by the customers. District Water Engineers' Offices (DWEO), other governmental organs and private enterprises willing to get their pumps repaired or water meters calibrated are supposed to meet the costs of the services. The income from these activities is then supporting the operations and maintenance of the workshops. The workshop manager will prepare a separate budget income for workshop units. The budget should also include income to cover the running costs.

3.3.3 HANDING OVER / SALE OF TOOLS AND EQUIPMENT (Mechanical Store)

Drilling Rig

According to an estimate for monthly operation costs of a drilling rig (Appendix 9), prepared by the drilling section, the KFWWSP proposes the rigs not to be handed over to the MoLRRWD. The drilling activities should be awarded to private sector and the MoLRRWD to take the responsibility for borehole design and supervision of works.

The drilling rigs have been serving programme since 1986 and the condition of machinery is still fair. Taking into consideration the age and condition the KFWWSP proposes that both drilling rigs with spare parts and accessories are sold to private drilling companies the expected revenue of the sale is KES 22 million. This revenue should be used for the development of piped water supplies.

Machinery

The machinery to be sold out are as follows:

- Drilling rig M/B KDV 549
- Drilling rig M/B KDW 451
- Compressor Atlas Copco XA 350
- Compressor Atlas Copco XA 350
- Welding generator Gen set 2 nos
- All spare parts of the rigs
- All rods mud pumps drilling bits and drilling accessories
- Lorry KDW 480
- Lorry KDW 439

A complete inventory of all machinery will be prepared before the final handing over.

3.3.4 HANDING OVER / SALE OF CONSTRUCTION MATERIAL (Construction and Pipe Store)

When the Programme changed the approaches from labour contracting to contracting out hundreds of items were left behind at the construction stores. Those materials are sold to contractors and deducted from contractors payments. Materials which are not used by the Programme are sold to suppliers by open tendering. Detailed plan for disposal of the remaining materials is under preparation.

Pipes, fittings and water supply materials are sold to private water supply development through full cost recovery construction and remaining stores will be handed over to DWEs and PWE.

3.4 OFFICE FACILITIES

3.4.1 HANDING OVER / SALE OF OFFICE BUILDINGS, STORES, EQUIPMENT AND TOOLS

KFWWSP main offices

KFWWSP has constructed/rehabilitated the offices for both PWEO and DWEO, Kakamega and two offices for the National Water Conservation and Pipeline Corporation (NWPC). The number of offices and the number of officers are as follows:

| | |
|--------|----------------------------|
| KFWWSP | 39 offices for 64 officers |
| PWEO | 20 offices for 52 officers |
| DWEO | 14 offices for 40 officers |
| NWPC | 2 offices for 10 officers |

It is proposed that the two store building, where Technical Department of KFWWSP is located today, is handed over to the MOLRRWD. If the MOLRRWD will not need the whole building, part of it can be reserved for other ministries. The stores on the upper yard (together with the mentioned two store building) are supposed to be remaining for PWEO, DWEO and NWPC.

The drilling store should be separated from the other upper yard with a proper fence, so that it can also be rent out or sold to private enterprises taking into the consideration the Government regulations on fixed assets. The value of sea containers and store shelves is about KES 200,000. All pipes, screens and casings should be sold along with drilling rigs to private drilling companies. The stores remaining with PWEO, DWEO and NWPC are still more than enough for their needs.

It is further proposed that at least one block from the main yard should be rented or allocated to any other ministry. The maintenance costs of the remaining offices will still be quite high to be carried by PWEO and DWEO.

If these proposals are implemented PWEO and DWEO are getting 17 new offices and thus the total number of offices will come from 34 up to 51.

Office furniture and equipment

The offices which will be sold/rented/handed over are going to be furnished with desks, chairs and bookshelves. Quite a remarkable number of computers, printers and other equipment for data processing will be handed over to PWEO at the end of 1995. Some of the equipment will for sure be written off at that time, but the major part will be in good working condition.

The details of the office equipment are presented in Appendix 4.

Handing over of computers

The Programme has 18 desk top and 4 portable computers that are currently operating. These computers are attached to 5 laser printers (one currently under repair), 12 dot matrix printers (one under repair) and 2 plotters (one out of order). There are also 4 extra keyboards.

The number of computers to be handed over to the PWEO will depend on the relevant databases to be handed over and also to operation and maintenance costs involved. A conservative operation and maintenance cost estimate for one computer attached to a laser printer is KES 7,000 per month. The same cost for a computer attached to a dot matrix printer is KES 4,500.

Based on the above factors, it is proposed that 3 desk top and 2 portable computers would be handed over to the PWEO together with 3 printers (1 laser and 2 dot matrix) and 1 plotter, and one computer with a dot matrix printer to each DWEO (5).

It is also proposed that the remaining computers should be sold and some upgrading should be done to the computers to be handed over. The upgrading mentioned here is to buy one AT 486 computer with a RAM 4 Mb and 210 Mb hard disk which would be handed over to the PWEO. Another upgrading required is to increase the memory for the other 7 computers by installing an additional 50 Mb memory card to each one. However, because of very old computer equipment, instead of increasing the memory capacity, the KFWWSP proposes that all old computers (1+5) should be replaced by new ones, if the funds are available. One to PWEO and one to each DWEO.

It is estimated that a revenue of KES 100,000 would be obtained out of the computer sale. The proposed acquisition of a new computer would cost approximately KES. 850,000 while the memory cards would cost approximately KES 350,000. The Programme has also quite a new digitizing table valued at KES 250,000 which could be sold out.

Training for PWEO and DWEOs personnel should be organized on the KFWWSP software during 1995.

4 IMPLEMENTATION AND FINANCING OF WATER SUPPLIES

When the programme was started in 1980, a supply driven approach was used. In this approach, the people were passive recipient of external funded services. The contribution from the beneficiaries was minimal especially in case of boreholes. Over the years this approach was found to be not suitable in the long run.

In the beginning of the Phase IV in 1993, a demand driven approach was started. The 'demand' was supposed not only to be an expression of felt needs, but also a genuine preparedness to make significant contributions to ensuring sustainable water supply developments. Community management and cost sharing were to be the corner stone of the strategy.

In 1993, the Programme together with the district authorities did a lot of ground work and many awareness campaign were carried out to prepare water user and parties involved for demand driven approach. In the beginning, only a few requests were received. The approach seems to be catching up and the number of requests received has gone up. However, although the number of requests is increasing it is still questionable on the community water supplies especially the water points. It would seem that, most of the request are from individuals or there is one individual or institutions sponsoring the community. The fear is that the water points may be used only by individuals. This matter should be followed by DWEs.

4.1 POINT WATER SOURCES

By end of 1993 there were 3174 water points managed by water committees of the communities. The water points were mostly developed using the supply driven approach. From May, 1993, up to May, 1994 a total of 125 water points have been developed using the demand driven approach. In this approach, the beneficiaries contribute in material, labour and cash between 25% to 100% of the total development cost of the facility. The break down of implementation costs is shown in Appendix 10. The demand driven approach is catching up in the area and the number of request is increasing as awareness is created and the message reaches more communities.

By end of 1995 when the Programme is planned to pull out, there will still be a large number of request and demand driven approach is expected to have taken root. For this reason, there may be need for external funding either from the public or private sector after 1995 to assist the communities. The water sector policy paper that is currently under planning will give the guidelines for the further development of water supplies in Kenya. The Programme recommends that the development of the point water sources would be done after the awareness and willingness have been created by the relevant bodies in accordance with the following procedure:

- (i) The undertaker will get registered in accordance with the official procedures;
- (ii) The undertaker will fulfill all the official requirements regarding, e.g. the landeasement, the application to drill the borehole(s), the application to abstract water the application to obtain power supply etc. The undertaker may request the technical assistance from either the relevant governmental body, the MOLRRWD and the MOCSS,

or he may hire the services of the private consultant for the management of the planning and implementation of the point water source.

- (iii) The undertaker may approach all the relevant sources, public or private for the finance, if deemed necessary. The implementation should be based on the full cost recovery, if the Government or any other party is not willing to subsidize the undertaker. The MOLRRWD should start developing viable financing systems, e.g. revolving funds, soft loans etc. from any available sources.
- (iv) The undertaker will organize operational and financial management of the supply assisted either by the MOLRRWD, if it has the resources and the obligations. The other option, if the external assistance is deemed necessary, is to seek for help from the private sector expertise.

4.2 PIPED WATER SUPPLIES

4.2.1 COMMUNITY WATER SUPPLIES

There are 16 community managed piped water supplies in the area. The water supplies are managed by the community through water committees. Most of these water supplies have been implemented with the assistance of the Programme. In addition there are several self help water projects in the area, which have been implemented with the help of RDF, NGOs etc. All the above projects are managed by water committees.

It is expected that these water projects will continue to be operated, maintained and managed by the water committees on behalf of the water users.

The development of community/self-help water supplies in the area is expected to continue. However, external funding for investments and technical assistance either from government, NGOs or other funding sources either from public or private sector is most likely needed.

During the Phase IV the objective is to improve the management of the community managed water supplies (CWSs), especially the financial management and budgeting. Also to improve the productivity of the CWSs a decision support system and an operational management manual will be developed. There will be considered also the following options to safeguard the sustainability and replicability of the CWSs:

- (i) An umbrella water users association (UWUA) will be established to give technical assistance. The sharing of knowledge and pooling of resources can bring faster and more feasible implementation and secure the long-term sustainability. The UWUA manning could be one qualified water engineer and a secretary. The UWUA could be financed for the two first years either by FINNIDA or by the CWSs. The activities could also include monitoring, collection of information and reporting the activities of the CWSs, dissemination of the information and training the communities willing to manage their own water supplies in the Province.

- (ii) The PWE's office will look after the aforementioned tasks. This would require further training of an officer by the Programme.
- (iii) One or more CWSs will be used as a training centre to introduce successful community management approaches for the communities willing to manage their own water supplies in the province.

The Programme will have further discussions about the options with the CWSs during the Phase IV. The UWUA establishment and the option to be selected will be depending on the CWSs' willingness to participate. The replication programme including the development of financing for the CWSs could be one of the activities after 1995.

The Programme recommends that the development of the piped water supplies would be done after the awareness and willingness have been created by the relevant bodies in accordance with the following procedure:

- (i) The undertaker will get registered in accordance with the official procedures;
- (ii) The undertaker will fulfill all the official requirements regarding, e.g. the landeasement, the application to drill the borehole(s), the application to abstract water the application to obtain power supply etc. The undertaker may request the technical assistance from either the relevant governmental body, the MOLRRWD and the MOCSS, or he may hire the services of the private consultant for the management of the planning and implementation of the piped water supplies.
- (iii) The undertaker may approach all the relevant sources, public or private for the finance, if deemed necessary. The implementation and operations should be based on the full cost recovery, if the Government or any other party is not willing to subsidize the undertaker. The MOLRRWD should start developing viable financing systems, e.g. revolving funds, soft loans etc.
- (iv) The undertaker will organize operational and financial management of the supply assisted either by the MOLRRWD, if it has the resources and the obligations. The other option, if the external assistance is deemed necessary, is to seek for help from the private sector expertise.

4.2.2 MINISTRY WATER SUPPLIES

There are a total of 31 ministry water supplies in the province. The water supplies are operated and managed by District Water Engineers. The District Water Engineers are responsible for planning, control and management of all water related matters in their districts. The development and management of these supplies will be implemented in accordance with the national policy.

One of the objectives regarding the Ministry managed water supplies (MWS) during the Phase IV is to improve the management, especially the financial management. Also to improve the productivity of the MWSs a decision support system and an operational management manual will be developed. In addition, the Programme will organize the Management By Results training

(MBR) in the Bungoma, Busia, Kakamega, Mt. Elgon and Vihiga District Water Offices. Based on the findings of the MBR the further recommendations will be done.

The Programme recommends that the MoLRRWD would consider changing the water rates policy towards the full cost recovery. At the same time the piped water systems should be given more autonomy to manage their finance. The ultimate goal should be the financial self-sustainability. The support for this could be given also after 1995.

The other priority activities for the possible further cooperation would be the extensions of the existing piped water systems, improvement of reliability of the piped water systems, development of water conservation programmes to reduce water demand especially during droughts, programmes to reduce the unaccounted for water, and development of public affairs programmes to get water users more involved and informed.

The development of the water supplies after 1995 will be done most probably in accordance with the water sector policy paper currently under preparation. If the policy paper will not be ready, the present official procedures must be followed. The Programme recommends that the transfer of the Ministry operated supplies to municipal, town, and county councils, consumers or the private sector would be started as deemed feasible. This transfer would require the capacity building for the coming undertakers. This could be one of the activities after 1995.

4.2.3 PRIVATIZATION OF WATER SUPPLIES

In accordance with the Project Document for the Phase IV the Programme has recently started the discussions with the DWEs regarding the possibilities to hand over some of the smaller MWSs to the communities. Based on these discussions, the viability of transferring the responsibilities, and the willingness of the communities the handing over process will be continued. One handing over process has been presently started.

The Programme recommends that this kind of an activity would be continued also after 1995. The development management options and the viability for further private sector participation or privatization, especially of the large and medium size MWSs, could be as one of the activities after 1995.

4.3 MONITORING OF WATER SUPPLIES

Point water sources

The point water sources will be monitored by the CDA. They submit the information to the Chiefs, who will transfer it further to the DWO. The other option is that the local repairman will give the information directly to the DWO, who will forward it to the DWEO. From there the information is distributed to the Headquarters as deemed necessary.

Community water supplies

The Programme suggests that the reports regarding the CWSs are submitted either to the UWUA directly to the DWEO.

Ministry water supplies

The MWSs will be monitored by the PWE through the DWEOs.

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**MINISTRY OF LAND RECLAMATION, REGIONAL AND WATER
DEVELOPMENT**

**ORGANIZATION CHARTS AND JOB DESCRIPTIONS
1994**

JOB DESCRIPTIONS FOR THE PERSONNEL IN THE ORGANIZATION CHART: BUNGOMA DISTRICT WATER OFFICE

Name: K. G. Galko
Title: District Water Engineer

Representative of Ministry of Land Reclamation Regional & Water Development in the District and responsible to the Provincial Water Engineer for the following duties and responsibilities:-

Overall planning, control and management of all water related activities in the District including financial management.

Coordinator of Kenya Finland Western Water Supply Programme activities in the District and technical advisor on all water activities undertaken by Non-Governmental Organizations in the District.

Member of District Development Committee, District Executive Committee, District Tender Board, District Advisory Committee, District Environmental Committee, District Coffee Board and Secretary to the District Water Board.

Any other duties as may be assigned.

Name: T. Kondo
Title: Head of Planning & Design

Responsible to the District Water Engineer for the following duties and responsibilities:-

Coordinating all feasibility studies, planning and design activities in the District including Kenya Finland Western Water Supply Programme duties.

Evaluating projects and making project proposals.

Making recommendations and preparation of project progress reports in liaison with the implementation section.

Preparation of forwarded budgets in conjunction with operation and maintenance.

Name: L. Mokaya
Title: Head Implementation

Responsible to the District Water Engineer for the following duties and responsibilities:-

In charge of all project implementation.

Preparation of reports for all projects and advises the Head of Planning & Design on project progress.

Processing of all procurement for Rural Development Funds projects.

Follow up of progress for Rural Development Funds project from District Development Officer's office.

Name: J. M. Nyangaga
Title: Head of Surface Water Resources

Responsible to the District Water Engineer for the following duties and responsibilities:-

In charge of all surface water related issues in the District.

Coordinating Hydrometeorological and hydrological survey and data collection.

Processing, analysing and compiling of surface water data.

Installation, maintenance and monitoring of the hydrometeorological network.

Appraisal of surface water potentials in the District.

Evaluation of abstractions and all applications for water permits.

Member of the District Water Board, and District Environmental Committee.

Monitoring of sedimentation rates into surface water bodies.

Name: Erick Amimo
Title: Assistant Hydrologist

Responsible to the Head of Surface Water for the following duties and responsibilities:-

Assists the Head of Surface Water in all his duties and responsibilities.

Ensuring that all Honorarium Gauge Readers are paid their allowance in time.

Name: F. Onyango
Title: Head of Water Quality

Responsible to the District Water Engineer for the following duties and responsibilities:-

Coordination of all water quality and pollution control activities in the District.

Monitoring of the quality of all water sources.

Advisor on chemical dosages in treatment works.

Monitoring of waste water treatment levels in the main industrial establishments and coffee factories in the District.

Member of District Coffee Working Group, District Environmental Committee and District Water Board.

Any other duties as may be assigned by the District Water Engineer.

Name: I. O. Mawinda
Title: Head of Ground Water

Responsible to the District Water Engineer for the following duties and responsibilities:-

Coordinating of all ground water exploration and exploitation in the District.

Collecting and analysing ground water data.

Preparation of hydrogeological sketch maps.

Siting of water points for Kenya Finland Western Water Supply Programme.

Appraisal of ground water potentials in the District.

Member of District Water Board and Chairman of Demand Driven Approach.

Any other duties as may be assigned by the District Water Engineer.

Name: Kabogo
Title: Inspector (Ground Water)

Responsible to the Head Ground Water for following duties and responsibilities:-

Inspection of water levels.

Monitoring of borehole and well yields (discharges).

Assists in ground water exploration and processing of ground water data.

Names: Omondi
Madanji

Title: Mechanics

Responsible to the Head of Mechanical Section for the following duties and responsibilities:-

Mechanical operations, maintenance of plants, equipment and vehicles, and any other work as may be assigned by the District Water Engineer or Head Mechanical section.

Name: J. W. Simiyu
Title: Head of Mechanical Section

Responsible to the District Water Engineer for the following duties and responsibilities:-

Coordinating the mechanical operations, maintenance of plants, equipment, and vehicles, preparation of maintenance and repair schedules, workshop stores management, preparations of vehicles returns and checking all work tickets.

Member of Provincial Mechanical Coordinating Meeting and any other work as may be assigned by the District Water Engineer.

Name: H. E. Okuthe
Title: Head of Electrical Section

Responsible to the District Water Engineer for the following duties and responsibilities:-

Co-ordination of electrical activities, i.e. water supply electrical installations, for both the Ministry of Land Reclamation Regional & Water Development and Kenya Finland Western Water Supply Programme.

Maintenance of all electrical equipment in the District, preparation of repair schedules for faulty electrical equipment. Member of provincial/mechanical meeting, any other work as may be assigned by the District Water Engineer.

Names: Onyango
 Kidavi
Titles: Electricians

Responsible to the Head of Electrical section for the following duties and responsibilities:-

Installation and maintenance of electrical equipments in water supplies and report of electrical faults in the offices at the District Headquarters and Divisions.

Name: Jeremiah R. Kiruaye
Title: Head of Operations and Maintenance

Responsible to the District Water Engineer for the following duties and responsibilities:-

Development and review of operation standards, for water supply systems, maintenance operations, rehabilitation, augmentation and extension works of water supplies, keeping new connections register and connections, preparing annual reports in liaison with the District Water Engineer.

Requisition of meters, forwarding and checking of operation charts, assigning duties to sewerage inspectors within municipalities and urban centres and any other duties as may be assigned by the District Water Engineer.

Names: D. O. Obiero
 S. Audo

Job Title: Monitoring - Operations and Maintenance 1&2

Responsible to the Head of Operation & Maintenance for the following duties and responsibilities:-

Planning maintenance schedules of plants and equipment, ensuring adequate supply of meters for water supply connections and water meter repairs.

Analysis and compilation of water production and sales returns, monitoring operations of existing water supplies through operational charts, preparing budgets for water supply connections in liaison with the District Water Engineer, updating and documenting procedures for operations and maintenance of water supplies, monitoring the performance of the existing water supplies against established plans and budgets, formulating guidelines on preventive maintenance of water supply systems, plants & equipments, preparation of monthly revenue returns, and any other duties as may be assigned by the District Water Engineer.

Names: Makacha - Kanduyi Division
 J. O. Ouma - Kimilili Division
 J. Mwasame - Webuye Division
 S. Adika - Sirisia Division

Title: Divisional Water Officers

Representative of Ministry of Land Reclamation Regional & Water Development in the division and responsible to the Head of Operation & Maintenance for the following duties and responsibilities, overall planning, control and management of all water related matters in the Division and member of sub-District Divisional Committee in the Divisions.

Names: Tukai
 Simiyu
 Enane
 Odundo
 Kasawa
 Amutabi

Title: Operators In charge

Responsible to the District Water Engineer for the following duties and responsibilities:-

Ensuring that all required chemicals for water treatment are available, cleanliness of the treatment works compound, ensuring the security of the chemicals store, ensuring that all sections of the operations charts are completed in time and forwarded to the District Water Officer by 5th of every month, allocation of duties to other staff working in the treatment works.

Name: G. Wanyama
Title: Revenue Collector

Responsible to the Head of Operation & Maintenance on the following duties and responsibilities:-

Ensuring that water bills are supplied to consumers in time, security of revenue collected in the stations, serving cut-off defaulters of water bills.

Name: W. O. Ofula
Title: Executive Officer (Administration)

Responsible to the District Water Engineer for all personnel management in the District. Head of the personnel branch, interpretation and implementation of personnel regulations and policy matters in the District in liaison with the District Water Engineer on appointment and promotion of staff complement control personnel emoluments. Posting and transfers of staff, recommendation of payment vouchers emanating from personnel section, training, courses, examination and payment of staff salaries.

Name: P. Maloba
Title: Personnel Officer

Responsible to head of administration/personnel section for the following duties:-

Supervision of staff in the personnel section, annual staff appraisal reports in liaison with District Water Engineer, discipline, cases, compliment, control salary advance, medical claims, students monthly training reports, N.H.I.F., N.S.S.F., queries, field staff and in Divisions and water supplies, P.C.A.'s from District Commissioner's office, applications and claims for advances, salaries, house allowance and related adjustments, erroneous payments, pensions and gratitude, workman compensation, payment of staff salaries and any other work assigned to him by the District Water Engineer.

Name: W. A. Boge
Title: Accountant

Responsible to the District Water Engineer for the following duties and responsibilities:-

In charge of accounts section, vote book control, preparation of forward budgets and other issues related thereto in liaison with section heads, follow up merchants payments the District Commissioner's treasury, Kenya Post & Telecommunications, Kenya Power & Lighting and water bills.

Follow up revenue collection at the Divisional cash offices in liaison with the District Commissioner's office. Follow up revenue returns, payments of staff salaries and ledger reconciliation at the District Commissioner's office.

Replying mails from merchants and any other duties as may be assigned by the District Water Engineer.

Name: Ngaira
Title: Registry Officer In charge

Responsible to the Head of Administration/Executive Officer for the following duties and responsibilities:-

Personnel files and subject files, marking of letter to the relevant files for action officers, ensuring paper filling, handling of incoming letters and dispatch of outgoing letters, supervision of file movement in the offices and any other duties as may be assigned by the District Water Engineer and Executive Officer.

Name: G. M. M. Sitati
Title: Supplies Officer

Responsible to the District Water Engineer for the following responsibilities:-

Supplies management including stores and issuing of stores, procurement of stores in accordance to the supplies policies and procedures, control of Divisional Supplies and water supplies stores, inventory of equipment, stores and returns, in liaison with the District Supplies Officer at the District Commissioner's and the Ministry Headquarters.

Audit queries related to stores, board of survey, recommendation of payment vouchers emanating from the supplies section, control of Rural Development Funds procurement and purchases, supervision of the staff deployed in supplies section, and any other duties as may be assigned to District Water Engineer.

Name: E. Wafula
Title: Storeman

Responsible to the supplies officer for the following duties and responsibilities:-

Raising quotations, preparation of receipt vouchers, co-ordination of cleanliness and arrangement of items in the store, keeping of stock records and postings of items on the store ledger cards, and any other duties as may be assigned by the Supplies Officer.

Name: Khaemba
Title: Community Coordinator

Responsible to the District Water Engineer and Kenya Finland Western Water Supply Programme for the duties and responsibilities:-

In charge of community and training sections at the base offices.

Coordinating all community based activities.

Selling of Driven Demand Approach ideas to the community.

General sensation of the community on programme ideas.

Name: T. Kondo
Title: Construction Coordinator

Responsible to the District Water Engineer and Kenya Finland Western Water Supply Programme for the following duties and responsibilities:-

Co-ordination of all Kenya Finland Western Water Supply Programme construction activities in the District.

In charge of construction staff.

Planning and programming of water point construction work.

Allocating of duties to water point inspectors.

Compiling of water point construction production reports.

Approval of fuel vouchers.

Ensuring that contracts are given out in time and payment to contractors is processed in time.

Name: T. Kondo
Title: Operation & Maintenance Coordinator

Responsible to the District Water Engineer and Kenya Finland Western Water Supply Programme for the following duties and responsibilities:-

Co-ordination of all Kenya Finland Western Water Supply Programme Operation & Maintenance activities in the District.

In charge of Operation & Maintenance activities in the District.

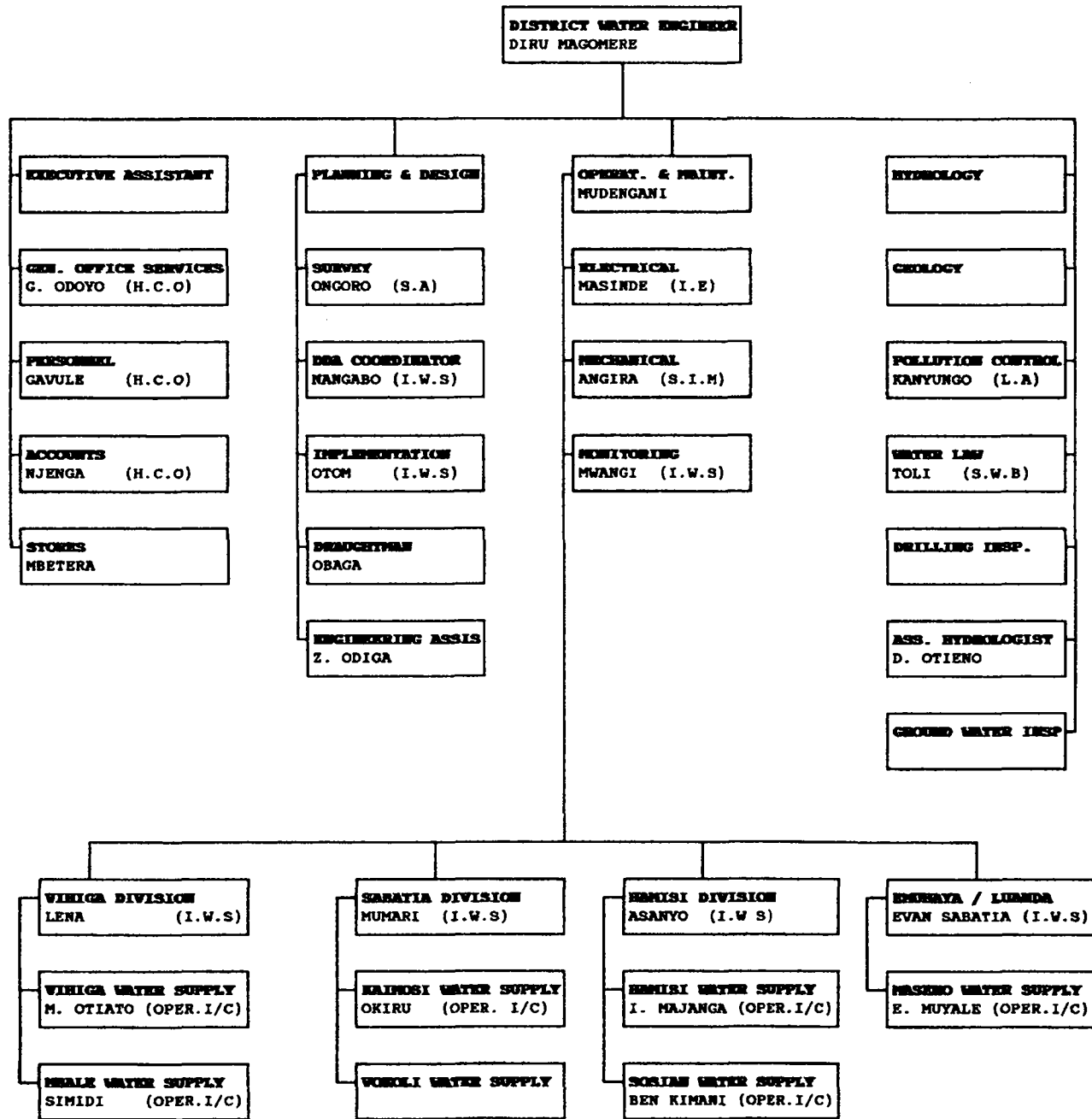
In charge of Operation & Maintenance staff.

Planning and programming of hand pump installations, repairs, changings and removals.

Requisition of pumps and pump parts from the programme.

ORGANIZATION CHART FOR VIHIGA DISTRICT WATER OFFICE - OCTOBER 1994

APPENDIX 1



JOB DESCRIPTIONS FOR THE PERSONNEL IN THE ORGANIZATION CHART: VIHIGA DISTRICT WATER OFFICE

Name: Diru Magomere
Title: District Water Engineer

Responsible to the Ministry of Land Reclamation, Regional and Water Development (MoLRRWD) in the district and to the P.W.E, overall planning control and management of all water resources and related matters including financial management.

Name: Mudengani
Title: Senior Inspector Water (Operation & Maintenance (O&M))

Responsible to District Water Engineer (D.W.E.) for planning maintenance work schedules of plant and equipment ensuring adequate supply of chemicals for water treatment and repairing the installations.

Name: Masinde
Title: Senior Inspector Electrical (I.E.)

Responsible to District Water Engineer (D.W.E.), for co-ordination of operation and maintenance of electrical installations eg; starter motors and lighting system.

Name: Angira
Title: Senior Inspector Mechanical

Responsible to D.W.E. for maintenance of mechanical plant equipment and vehicles, maintenance of vehicles inventory and preparation of returns.

Name: Mwangi
Title: Inspector Water Supplies (Monitoring)

Responsible to D.W.E. for compilation and analysis of water production and sales returns through operation charts and on the spot inspection as revenue officers.

Name: Otom
Title: Inspector Water (Implementation)

Responsibilities for supervision of construction and augmentation works.

Name: Odiga
Title: Engineering Assistant
Planning & Design

Co-ordination of feasibility studies, planning and designing of water projects.

Name: Obaga
Title: Draughtsman

Updating water supply survey maps and co-ordinating drawing office activities.

Name: Otleno
Title: Water Resources Hydrology Assistant

Collecting hydrological and hydrometeorological data.

Name: Kanyungo
Title: Water Quality & Pollution Control Lab Technologist

Ensure effluent from factories, rural and urban establishments adhere to W.H.O requirements, and that public water supplies are treated to the required standard.

Name: Toli
Title: Senior Water Balliff (Water law)

Responsible to D.W.E. on the interpretation and enforcement of the water act.

Name: Odoyo
Title: Higher Clerical Officer (H.C.O) - General Office Services

Office cleanliness, security matters, general office correspondences, supervision of staff in personnel department.

Name: Gavule
Title: Clerical Officer (C.O.) (Personnel)

Staff correspondences and maintenance of personal files.

Name: Njenga
Title: Higher Clerical Officer (Accounts)

Maintenance of vote book, preparation of payment vouchers, expenditure returns and imprests.

Name: Mbetera
Title: Store Man Stores

Receipt and issue of stores and procurement, preparation of quotations
L.P.O and L.S.O.

DIVISIONAL WATER OFFICERS

Names: Lena
Munari
Sabatia
Asanyo

Title: Inspector Water Supplies

Responsibilities to the D.W.E. on water resources management in the divisions, advisors to the sub – D.D.C. on water resources. Maintenance of operational standards in the existing water supplies. Ensure that meter reading books, and ledgers are kept up to date.

Names: Otiato
Simidi
Okiru
Machanga
Kimani
Muyale

Title: Water Supply Operators

Responsible for the day to day operation of individual water supplies.

Ensure all the consumers within the limit of supply get service, meters are read in time, bills distributed and cut offs effected. Master roll and plant log books are maintained.

Names: Otiato
Simidi
Okiru
Machanga
Kimani
Muyale

Title: Water Supply Operators

Responsible for the day to day operation of individual water supplies. Ensure all the consumers within the limit of supply get service, meters are read in time, bills distributed and cut offs effected. Master roll and plant log books are maintained.

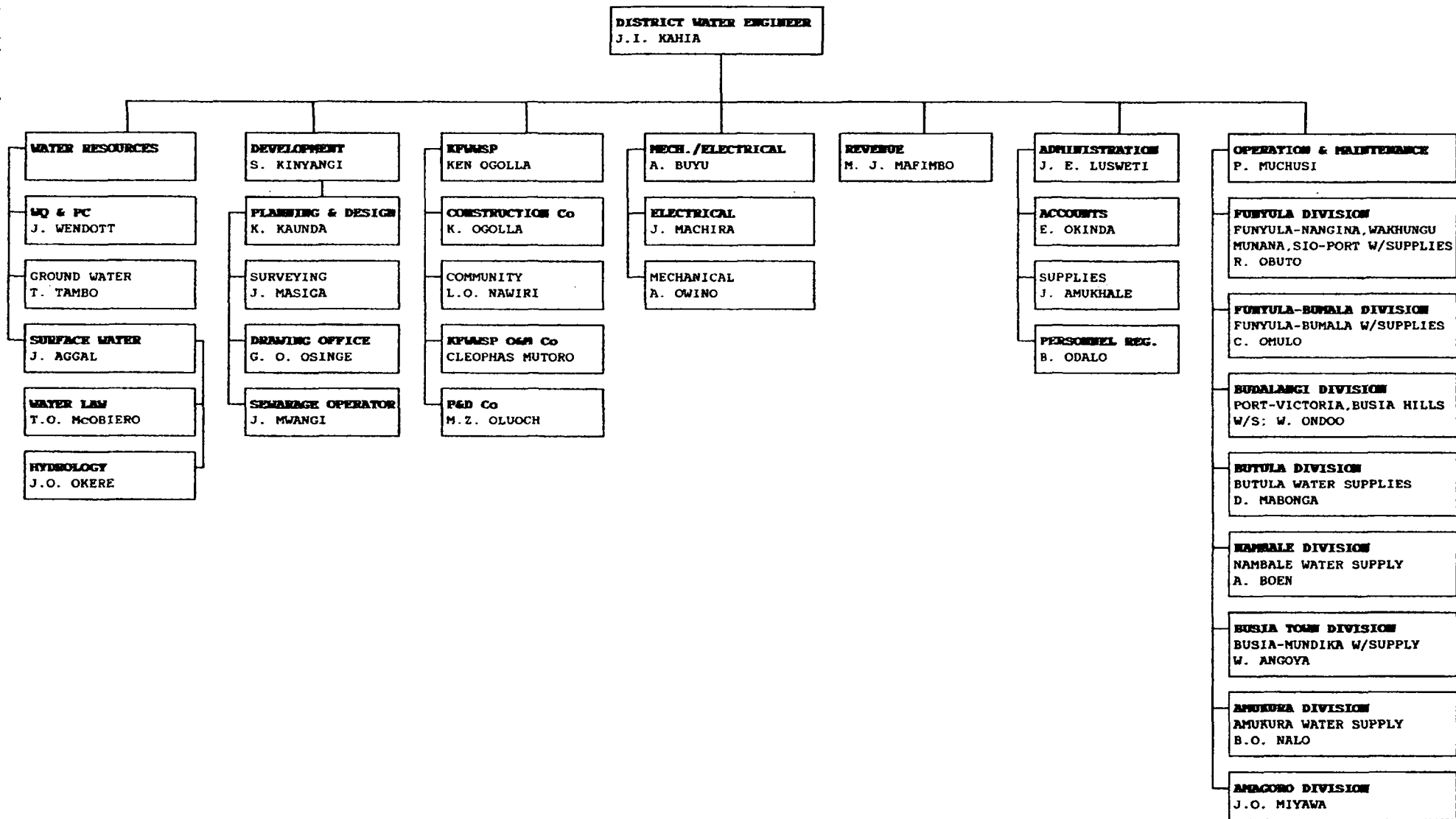
Names: Ongoro
Title: Survey Assistant (S.A)

Responsible to D.W.E. for carrying out survey work and profiling.

Name: Nangabo
Title: Inspector Water Supplies (Demand Driven Approach (DDA) Co-ordination)

Sensitize community on the demand driven approach, co-ordinate the feasibility studies, planning, design and implementation of Kenya Finland Wester Water Supply Programme and community based water projects.

ORGANIZATION CHART FOR BUSIA DISTRICT WATER OFFICE - OCTOBER 1994



LEGEND

CO - KFWWSP CO-ORDINATOR
 O&M - OPERATION & MAINTENANCE
 WQ & PC - WATER QUALITY AND POLLUTION CONTROL

JOB DESCRIPTIONS FOR THE PERSONNEL IN THE ORGANIZATION CHART: BUSIA DISTRICT WATER OFFICE

Name: J. I. Kahia
Title: Engineer

Representatives of the MoLRRWD in the district and responsible to the Provincial Water Engineer (P.W.E) for the following duties and responsibilities:-

Overall planning, control and management of all water related matters in the district including financial management.

Name: J. Aggal
Title: Head of Surface Water Division

(i) Hydrology: J. O. Okere

Hydromet data generation.

All hydrometeorological records.

Analysis of hydromet data.

Maintenance of hydromet records.

(ii) Water Law: T. O. McObiero

Inspection of water courses/rivers/lakes.

Processing of applications for water permits.

Enforcement of water Act Cap 372 Laws.

Conservation of water.

Administration and management of hydromet data.

Name: T. Tambo
Title: Head of Ground Water Division

Ground water investigations.

Ground water development supervision.

Reports on hydrology.

Drilling for exploration of ground water.

Ground water development coordination.

Ground water data generation.

Administration and Management of hydrological data.

Name: P. Muchusi
Title: Head of Operation and Maintenance Division

Operations of water supplies.

Maintenance of water supplies.

Monitoring of water supplies.

Produce and maintain operation charts of water supplies.

Electrical support services for water supplies.

Repair of plant and equipment.

Servicing of plant and equipment.

Administration and management of O&M activities.

Name: S. Kinyangi
Title: Head of Development Division

Survey for water supplies.

Planning of water projects.

Design of water projects.

Implementation of water projects.

Coordinate development of water supplies.

Administration and management of O&M activities.

Name: K. Ogolla
Title: Kenya Finland Western Water Supply Programme (KFWWSP) Coordinator

Administration of Kenya Finland Western Water Supply Programme activities.

Heads construction of KFWWSP assisted projects.

Supervises KFWWSP sources constructions.

Maintains KFWWSP imprest.

Coordinates transport for Demand Driven Approach applications.

Name: C. Mutoro
Title: Kenya Finland Western Water Supply Programme (KFWWSP) Operation & Maintenance Coordinator

Inspects and supervises O&M of water projects assisted by KFWWSP.

Trains locational repairmen.

Supervises locational repairmen.

Monitoring of KFWWSP assisted schemes.

Name: L. O. Nawiri
Title: Community Coordinator

Community developments.

Community mobilization.

Land easement.

Registration of water communities.

Coordination with Ministry of Culture and Social Services.

Coordinating opening of bank accounts for community water supplies.

Monitoring and evaluation of community water projects.

Name: M.Z. Oluoch
Title: Planning & Design coordinator

Planning and design of KFWWSP assisted water projects.

Supervision of construction of KFWWSP assisted projects.

Name: M. J. Mafimbo
Title: Head of Revenue Division

Maintenance of consumer records.

Billing.

Meter reading/repair.

Consumer disconnection.

Revenue collection.

Posting of bills and ledger control.

Ledgers control.

Water reconnection.

Administration and Management of revenue data.

Name: J. E. Lusweti
Title: Head of Administration Division

Complement control.

Staff records.

Personnel files.

Accounts, Merchants and Personnel.

Stores records.

Store survey.

Inventory.

Procurement of required items.

Processing of payments for merchants and individuals.

Expenditure control.

Administration of staff records.

Name: J. Wendott
Title: Water Quality & Pollution Control

Sampling of rivers/lake water.

Pollution control.

Water quality monitoring.

Inspection of industries for pollution control.

Water quality tests in small laboratory.

Attending meetings on Environment management.

Administration and management of water quality and pollution data.

Names: C. Omulo - Funyula Bumala
R. Obuto - Funyula
W. Ondoo - Budalangi
D. Mabonga - Butula
A. Boen - Nambale
W. Angoya - Busia Town
B. O. Nalo - Amukura
J. O. Miyawa - Amagoro

Title: Divisional Water Officers

Representatives of Ministry of Land Reclamation, Regional and Water

Development in the Division.

Planning, Design, Operation and Maintenance of water supplies.

Attend sub - District Development Committee.

Guide sub - District Development Committee development.

Community mobilization.

Monitoring of performance of water supplies.

Administration and management of water activities.

Name: Wilson Rotich
Title: Inspector of Water Supplies

Divisional Water Officer – Cheptais Division.

Responsible for operation and maintenance of water supplies in the Division.

Member of Divisional Development Committee.

Production of periodical O&M reports in the Division.

Monitoring and inspection of water supplies in the Division.

Name: Aggrey O. Hawala
Title: Higher Clerical Officer

Responsible for preparation of vouchers for payment of staff and merchants.

Maintenance of Departmental Accounts Ledger.

Preparation of financial returns.

Collection and remittance of water revenue to the district treasury.

Handling of financial stationery.

Name: George Edewait
Title: Draughtsman

To manage and plan for all administrative and technical matters concerning drawing office.

To liaise with Engineering Assistant (water) on matters pertaining to planning and design drawings.

To produce relevant drawings.

Responsible for safe custody of drawings.

Name: Kiptanui Birir
Title: Water Supplies Operator

Responsible for day to day management of water supply.

Fills and submits monthly water supply operation charts.

Makes a request of materials for production from the Divisional Water Officer.

Responsible for the operation and maintenance of pipelines, engines, maker posts, meter reading, effective cut-offs and reconnections.

Responsible for new consumer connections.

NAME: Benson Olubayi
TITLE: Plumber/Pipefitter

Maintenance of water pipelines.

Maintenance of plumbing works in offices and water supplies.

Disconnections and reconnections of consumer meters.

Water meter readings.

Preventive maintenance of valves.

NAMES: Benson Olubayi
Martin Kipserem
Shaban Sagana
Emmanuel Ojiloto
Dickson Ipomai
Fredrick Etaa
Omuse Odoi
George Sichei
Charlies Maeya
Fredrick Masinde
Cleophas Nyongesa
Erick Omanyala
Isaya Ongata

TITLE: Subordinate Staff

General duties in water supplies.

Member of pipe burst crew.

Clearing sites and compound cleaning.

Loading and unloading of materials.

Security duties.

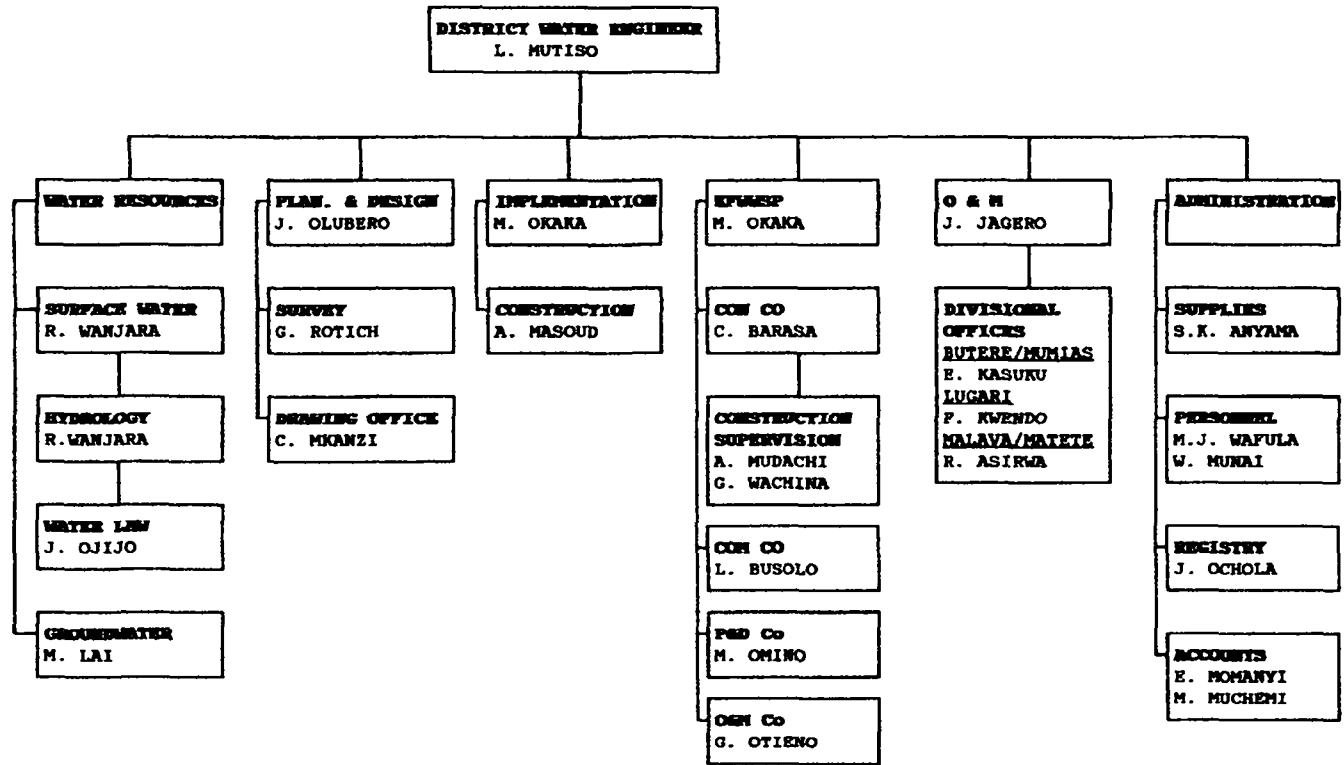
Line patrolling.

Pipe attending.

Chemical attending.

Meter reading.

ORGANIZATION CHART FOR KAKAMEGA DISTRICT WATER OFFICE - OCTOBER 1994



LEGEND

- O&M Co - OPERATION AND MAINTENANCE CO-ORDINATOR
- COM Co - CONSTRUCTION COORDINATOR
- COM Co - COMMUNITY COORDINATOR
- P&D Co - PLANNING AND DESIGN COORDINATOR

JOB DESCRIPTIONS FOR THE PERSONNEL IN THE ORGANIZATION CHART: KAKAMEGA DISTRICT WATER OFFICE

Name: L. M. Mutiso
Title: Engineer II

Representatives of the MoLRRWD in the district and responsible to the Provincial Water Engineer (P.W.E) for the following duties and responsibilities:-

Overall planning, control and management of all water related matters in the district including financial management.

Name: Meshack H. F. Okako
Title: Superintendent (Water)

Management of water supplies, sewerage works and pollution control.
Co-ordination of the provision of water supplies, sewerage and pollution control services as well as allocation of duties and distribution of staff in various units.
Train and supervise staff working under them.

Name: John Jagero
Title: Senior Inspector (Water)

In charge of operations and maintenance activities in the district.

Responsible to the D.W.E. on implementation of water projects in the district.

Co-ordinate and execute the implementation of water supplies.

Name: Joseph Olubero
Title: Senior Inspector (Water)

In charge of planning and design.

Responsible to the D.W.E. on planning and design activities in the district (work in conjunction with surveyor and draughtsman).

Name: R. Wanjara
Title: Hydrologist II

Responsible to the D.W.E. on surface water activities in the district.

Name: George Rotich
Title: Survey Assistant

Responsible to D.W.E. for carrying out survey work and profiling.

Name: A. Masoud
Title: Senior Inspector (Water)

In charge of construction activities.

Responsible to the D.W.E. on implementation of water projects in the district.

Name: S. K. Anyama
Title: Supplies Assistant

Responsible to the D.W.E. on procurement procedures and payments in the district.

Name: Martin Lai
Title: Geologist II

Responsible to the D.W.E on ground water activities in the district.

Any other duties as can be assigned by the District Water Engineer.

Name: Jacob Ojjo
Title: Water Bailiff II

Responsible to the District Water Engineer on administrative matters in the district.

Name: Charlies Mukanzi
Title: Assistant Draughtsman

To manage and plan for all administrative and technical matters concerning drawing office.

To liaise with Engineering Assistant (water) on matters pertaining to planning and design drawings.

To produce relevant drawings.

Responsible for safe custody of drawings.

Name: E. Kasuku
Title: Senior Inspector (Water) – Butere & Mumias

Responsible to D.W.E. for planning maintenance work schedules of plant and equipment ensuring adequate supply of chemicals for water treatment and repairing the installations.

Name: F. Kwendo
Title: Senior Inspector (Water) – Lugari

Responsible to D.W.E. for planning maintenance work schedules of plant and equipment ensuring adequate supply of chemicals for water treatment and repairing the installations.

Name: R. Asilwa
Title: Senior Inspector (Water) – Malava & Matete

Responsible to D.W.E. for planning maintenance work schedules of plant and equipment ensuring adequate supply of chemicals for water treatment and repairing the installations.

Names: M. J. Wafula
W. Munai
Title: Higher Clerical Officer (Personnel)

Office cleanliness, security matters, general office correspondences, supervision of staff in personnel department.

Name: J. Ochola
Title: Clerical Officer (Registry)

Office cleanliness, security matters, general office correspondences.

Name: E. Momanyi
Title: Clerical Officer (Accounts)

Maintenance of vote book, preparation of payment vouchers, expenditure returns and imprests.

Name: G. Otieno
Title: Senior Inspector (Water) (Operation & maintenance coordinator)

Coordination of operations and maintenance in the district.

Inspects and supervises O&M of water projects assisted by Kenya Finland Western Water Supply Programme.

Trains locational repairmen.

Supervises locational repairmen.

Monitoring of Kenya Finland Western Water Supply Programme assisted schemes.

Name: M. Omino
Title: Senior Inspector (Planning & Design coordinator)

Planning and design of Kenya Finland Western Water Supply Programme assisted water projects.

Supervision of construction of Kenya Finland Western Water Supply Programme assisted projects.

Name: L. Busolo
Title: Community Coordinator

Community developments.

Community developments.

Community mobilization.

Land easement.

Registration of water communities.

Coordination with Ministry of Culture and Social Services.

Coordinating opening of bank accounts for community water supplies.

Monitoring and evaluation of community water projects.

Names: **A. Mudachi**
 G. Wachina

Title: **Senior Inspectors (Water)**

Supervise construction of Kenya Finland Western Water Supply Programme assisted projects.

Name: **C. Barasa**

Title: **Construction Coordinator**

Administration of Kenya Finland Western Water Supply Programme activities.

Heads construction of Kenya Finland Western Water Supply Programme assisted projects.

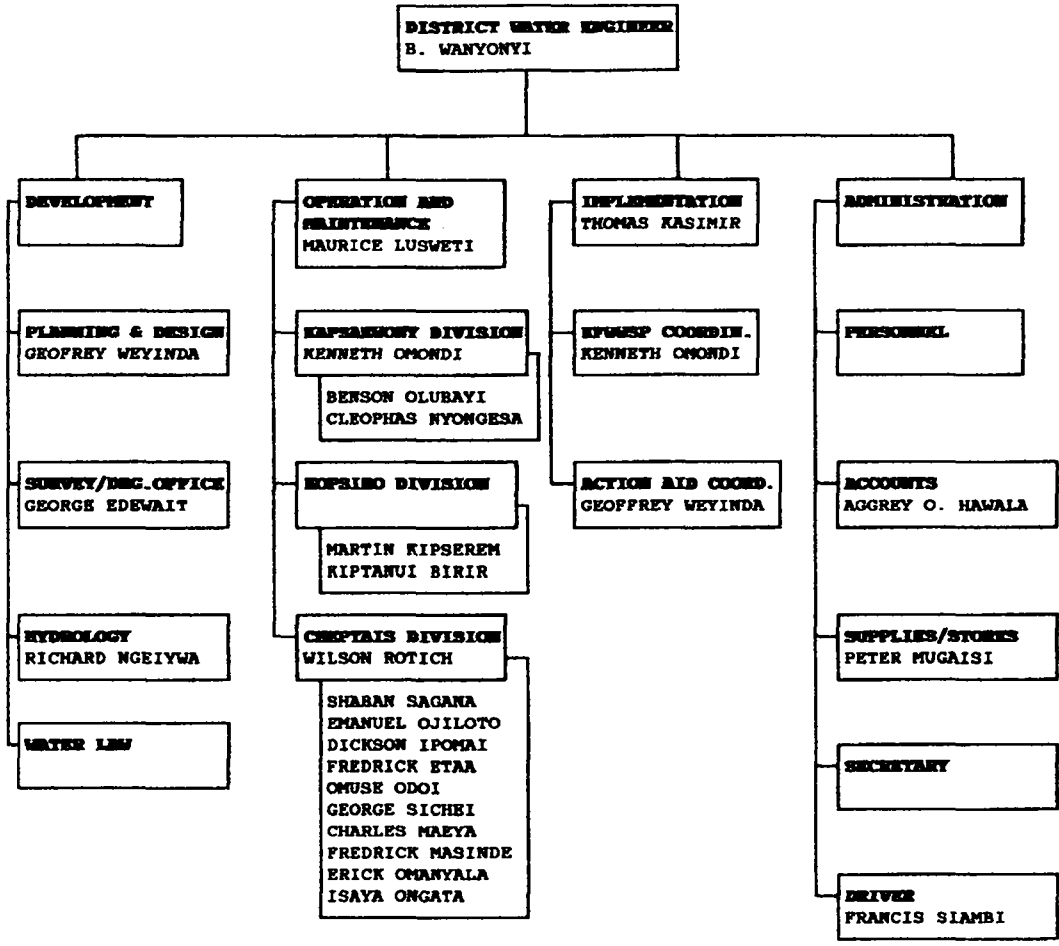
Supervises Kenya Finland Western Water Supply Programme sources construction.

Maintains KFWWSP imprest.

Coordinates transport for DDA applications.

ORGANIZATION CHART FOR MT. ELGON DISTRICT WATER OFFICE - OCTOBER 1994

APPENDIX 1



JOB DESCRIPTIONS FOR THE PERSONNEL IN THE ORGANIZATION CHART: MT. ELGON DISTRICT WATER OFFICE

Name: B. Wanyonyi
Title: District Water Engineer

Head of water development services in the district.

Supervision and organisation of work and staff in the district.

Overall in-charge of finance, administration, personnel and technical units in the district.

Member of District Advisory Committee, District Tender Board and secretary to District Water Board.

Name: Thomas Kasimir
Title: Senior Inspector (Water)

Head of implementation section.

Supervision, planning and organisation of work and staff in the section.

Coordinate and execute the implementation of water supplies.

Estimation of amount and cost of construction materials.

Name: Maurice Lusweti
Title: Senior Inspector (Water)

Head of Operation & Maintenance Section (O&M).

Supervision and organisation of work and staff in the section.

Responsible for operation of water supplies, records of pumps, engine working hours, fuel consumption, water pumped, used, unaccounted for, water rates, revenue collection and returns.

Support to Operation & Maintenance (O&M) of Community operated piped schemes.

Preparation of O&M monthly and annual evaluation reports.

Ensuring that materials for production of water are made available in water supplies.

Name: Richard Ngeiywa
Title: Assistant Hydrologist

Head of Hydrology section.

Supervision and organisation of work and staff in the section the section.

Installation of hydrometeorological stations.

Observation of automatic and manual recording stations, gauging rivers, coding, storage and retrieval of data.

Operation and maintenance of gauging stations.

Maintenance of returns from hydrometeorological stations.

Data processing and handling of stores and stationary.

To prepare periodical reports for the section.

Name: Peter Mugaisi
Title: Supplies/Stores

Management of district stores.

Security and safe custody of stores.

Stores accommodations.

Procurement and issue of stores.

Issue and rationing of stores where demand exceeds supply.

Recommending disposal of unserviceable stores.

Making sure that proper government stores regulations are followed.

Writing and processing of LPO's and LSO's.

Supervision of staff under him.

Name: Geoffrey Weyinda
Title: Engineering Assistant (water)

Head of Planning & Design unit.

To plan and manage the work of unit to execute design of water supplies with the production of appropriate tender document.

To produce the design of community water supplies conforming to the related feasibility studies.

To liaise with survey and draughtsman to provide efficient timing of survey, site investigation and production of drawings and print.

To prepare estimates and forecasts of project cost for design and construction.

To prepare periodical reports for the section.

Co-ordinate activities of ACTION AID – Kapsokwony.

Name: Kenneth Omondi
Title: Inspector of Water Supplies

Divisional water officer – Kapsokwony.

Kenya Finland Western Water Supply Programme (KFWWSP) co-ordinator in the district.

Responsible for operation and maintenance of water supplies in the Division.

Member of Divisional Development Committee.

Production of periodical O&M reports in the Division.

Monitoring and inspection of water supplies in the Division.

APPENDIX
STAFFING PLAN 1995

STAFFING PROGRAMME, 1995

01 ADMINISTRATION DEPARTMENT

| STAFF | CATEGORY | JAN | FEB | MARCH | APRIL | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|-------------------|----------|-----|-----|-------|-------|-----|-----|-----|-----|-----|-----|-----|-----|
| PROJECT MANAGER | CONS. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| SECRETARY | KFWWSP | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| PERSONNEL OFFICER | MoLRRWD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| CLERICAL OFFICER | KFWWSP | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| STAFF | MoLRRWD | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| STAFF | KFWWSP | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| PLANNED | CONS. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| PLANNED | MoLRRWD | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| PLANNED | KFWWSP | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| PLANNED | TOTAL | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |

03.04 TECHNICAL DEPARTMENT

| STAFF | CATEGORY | JAN | FEB | MARCH | APRIL | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|----------|-----|-----|-------|-------|-----|-----|-----|-----|-----|-----|-----|-----|
| HEAD OF DEPARTMENT | MoLRRWD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| HEAD OF WATER POINT SEC | MoLRRWD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| HEAD OF PIPED WATER SEC. | MoLRRWD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| HEAD OF MATERIAL & TRANSPORT | KFWWSP | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - | - | - | - |
| HEAD OF MECHANICAL SEC. | MoLRRWD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| HEAD OF DRILLING UNIT | MoLRRWD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| HEAD OF MONITORING & HYDROLOGY UNIT (WS) | MoLRRWD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| HEAD OF O&M UNIT (PS) | MoLRRWD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| HEAD OF ELECTRICAL UNIT | MoLRRWD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| FINANCIAL & MANAGEMENT ADVISOR | CONS. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| FINANCIAL & MANAGEMENT SPECIALIST | MoLRRWD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| HEAD OF WATER QUALITY SEC. | MoLRRWD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| HEAD OF TEST PUMPING UNIT | MoLRRWD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| STAFF | MoLRRWD | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 |
| STAFF | KFWWSP | 48 | 48 | 48 | 47 | 47 | 47 | 25 | 25 | 25 | 25 | 25 | 25 |
| PLANNED | CONS. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| PLANNED | MoLRRWD | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 |
| PLANNED | KFWWSP | 48 | 48 | 48 | 47 | 47 | 47 | 25 | 25 | 25 | 25 | 25 | 25 |
| PLANNED | TOTAL | 95 | 95 | 95 | 94 | 94 | 94 | 72 | 72 | 72 | 72 | 72 | 72 |

03.04 TECHNICAL DEPARTMENT IN DISTRICTS

| STAFF | CATEGORY | JAN | FEB | MARCH | APRIL | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|------------------------|----------|-----|-----|-------|-------|-----|-----|-----|-----|-----|-----|-----|-----|
| TECHN. CO-ORDINATOR | MoLRRWD | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| GEOLOGIST | MoLRRWD | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| WATER BAILIFF | MoLRRWD | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| COMMUNITY SURVEYOR | MoC&SS | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| COMMUNITY SURVEYOR | MoLRRWD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| COMMUNITY CO-ORDINATOR | MoC&SS | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| COMMUNITY CO-ORDINATOR | MoLRRWD | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| CONSTR. SUPERVISOR | MoLRRWD | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| DRIVER | MoLRRWD | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| PLANNED | MoLRRWD | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 |
| PLANNED | MoC&SS | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| PLANNED | TOTAL | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 |

05 COMMUNITY & TRAINING DEPARTMENT

| STAFF | CATEGORY | JAN | FEB | MARCH | APRIL | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|----------------------------|----------|-----|-----|-------|-------|-----|-----|-----|-----|-----|-----|-----|-----|
| HEAD OF DEPARTMENT | CONS. | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - | - | - | - |
| HEAD OF COMMUNITY DEV SEC. | KFWWSP | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| HEAD OF SOCIAL ECONOMIC. | KFWWSP | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| TRAINING CO-ORDINATOR | MoLRRWD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| STAFF | KFWWSP | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| STAFF | MoC&SS | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| PLANNED | CONS. | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - | - | - | - |
| PLANNED | KFWWSP | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| PLANNED | MoLRRWD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| PLANNED | MoC&SS | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| PLANNED | TOTAL | 103 | 103 | 103 | 103 | 103 | 103 | 102 | 102 | 102 | 102 | 102 | 102 |

RESIDENT ENGINEER'S OFFICE

| STAFF | CATEGORY | JAN | FEB | MARCH | APRIL | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|--------------------|----------|-----|-----|-------|-------|-----|-----|-----|-----|-----|-----|-----|-----|
| RESIDENT ENGINEER | MoLRRWD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| ASST. RE's (DWE's) | MoLRRWD | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| RE's ASSISTANTS | MoLRRWD | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| PLANNED | TOTAL | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |

STAFFING PLAN (DIRECTLY EMPLOYED) 1995

| | 1994 31.12 | KAKAMEGA | | |
|------------------------|---------------|-------------|-------------|-------------|
| | | 1.1 - 31.3 | 1.4 - 30.6 | 1.7 - 31.12 |
| | 106 | 67 | 66 | 41 |
| ADMINISTRATION | [8] | [7] | [7] | [7] |
| PLANNING * | [13] | [4] | [4] | [1] |
| General | 2 | - | - | - |
| Field Investigation | 4 | 1 | 1 | - |
| Test Pumping | 2 | 1 | 1 | - |
| Water Quality | 3 | - | - | - |
| Monitoring | 2 | 2 | 1 | 1 |
| TECHNICAL | [64] | [47] | [46] | [24] |
| Construction General | 1 | 2 | 2 | 2 |
| Office Maintenance | 4 | 2 | 2 | - |
| Construction Stores | 3 | 3 | 2 | 1 |
| Kakamega District Base | 4 | 4 | 4 | 2 |
| Busia District Base | 2 | - | - | - |
| Drilling | 6 | 6 | 6 | 5 |
| Garage | 12 | 6 | 6 | 5 |
| Mechanical Stores | 3 | 2 | 2 | 1 |
| Control Unit | 13 | 14 | 14 | 2 |
| Piped Scheme | 8 | 3 | 3 | - |
| Water Point | 1 | 1 | 1 | - |
| Estate | 6 | 6 | 6 | 6 |
| COMMUNITY | [21] | [9] | [9] | [9] |
| Community Development | 5 | 5 | 5 | 4 |
| Kakamega District Base | 4 | - | - | - |
| Bungoma District Base | 1 | - | - | - |
| Busia District Base | 4 | - | - | - |
| Training | 3 | 1 | 1 | 1 |
| Socio-Economic | 4 | 3 | 3 | 3 |

* To be merged with the technical department by 1.1.1995

OFFICE ACCOMMODATION REQUIREMENT

| Section | N ^o of Officers Available | N ^o of Officers in the Draft | N ^o of Offices Available | Additional Offices required | Remarks |
|-------------------|--------------------------------------|---|-------------------------------------|-----------------------------|---|
| PWE'sO | 65 | 52 | 20 | 45 | The number includes 42 from the MoLRRWD and 23 who are currently to the Programme |
| DWE'sO | 40 | 40 | 14 | 26 | |
| NWCPC Kakamega | 10 | 10 | 2 | 8 | |

NB: The number of offices indicated here are only senior officers who will require accommodation and does not include subordinate staff who do not require accommodation.

APPENDIX 3

| DEPARTMENTS | OFFICE N ^o | N ^o OF EMPLOYEES PER OFFICE | |
|---------------------------------|-----------------------|--|--|
| <u>ADMINISTRATION</u> | 1 | 2 | |
| " | 2 | 2 | |
| " | 3 | 1 | |
| " | 4 | 1 | |
| " | 12 | 1 | |
| " | 13 | 1 | |
| " | 21 | 1 | |
| " | 22 | 1 | |
| <u>PLANNING & DESIGN</u> | 5 | 2 | |
| " | 6 | 1 | |
| " | 7 | 1 | |
| " | 8 | 2 | |
| " | 9 | 1 | |
| " | 11 | 1 | |
| " | 14 | 1 | |
| " | 20 | 2 | |
| " | 23 | 1 | |
| <u>LABORATORY</u> | N/A | 5 | |
| <u>TECHNICAL</u> | 10 | 2 | |
| " | N/A | 2 | |
| " | " | 2 | |
| " | " | 2 | |
| " | " | 2 | |
| " | " | 2 | |
| " | " | 1 | |
| " | " | 1 | |
| " | " | 2 | |
| " | " | 2 | |
| " | " | 1 | |
| " | " | 1 | |
| Constr. Stores | " | 2 | |
| Drilling Store | " | 1 | |
| Mechanical Store | " | 4 | |
| Technical | " | 1 | |
| Transport Office | " | 4 | |
| Central Unit | " | 3 | |
| Metal & Machine | " | 1 | |
| Motor bike | " | 1 | |
| Two offices for Water Co-op | 1 | 2 | |
| | 2 | 8 | |
| <u>Community & Training</u> | 15 | 2 | |
| " | 16 | nil | |
| " | 17 | 1 | |
| " | 18 | 2 | |
| " | 19 | 5 | |
| " | N/A | 2 | |
| " | " | 1 | |

APPENDIX 3

| DEPARTMENTS | OFFICE N ^o | N ^o OF EMPLOYEES PER OFFICE | |
|---------------------------------------|-----------------------|---|-------------|
| KAKAMEGA DISTRICT BASE OFFICES | 6 | 1 | Technical |
| " | 10 | 2 | " |
| " | 1 | 3 | Com.& Train |
| " | 2 | 1 | " |
| " | 3 | 1 | " |
| " | 4 | 1 | Technical |
| " | 5 | 1 | P& Design |
| " | 8 | 2 | Technical |
| " | 9 Laboratory | 1 | " |
| Central Store | N/A | 1 | " |
| PROVINCE | 1 PWE | 1 | |
| | 2 | 2 | |
| | 3 | 1 | |
| | 4 | 5 | |
| | 5 | 1 | |
| | 6 | 1 | |
| | 7 | 1 | |
| | 8 | 1 | |
| | 9 | 3 | |
| | 10 | 6 | |
| | 11 | 1 | |
| | 12 | 8 | |
| | 13 | 3 | |
| | 14 | 1 | |
| | 15 | 1 | |
| | 16 | 2 | |
| | 17 | 6 | |
| Inspectors Offices | N/A | 3 | |
| | " | 2 | |
| | " | 3 | |
| DISTRICT WATER ENGINEER | 1 | 2 | |
| | 2 | 1 | |
| | 3 | 1 | |
| | 4 | 1 | |
| | 5 | 4 | |
| | 6 | 5 | |
| | 7 | 1 | |
| | 8 | 2 | |
| | 9 | 2 | |
| | 10 | 8 | |
| | 11 | 6 | |
| Workshop Office | N/A | 3 | |
| " | " | 2 | |
| Provincial Mechanical Store | " | 3 | |

OFFICE ACCOMMODATION PROVINCIAL WATER ENGINEER'S OFFICE

1. P.W.E's Office
2. Secretary's Office
3. Conference Room (Board Room)
4. Library
5. Head of Surface Water
6. Supportive hydrology staff
7. Officer in Charge of Water Law
8. Supportive Water Law Staff
9. Head of Ground Water
10. Supportive Ground Water Staff
11. Head of Water Quality
12. Supportive WQ Staff
13. Head of Operation and Maintenance
14. Operation and Maintenance (Monitoring)
15. Operation and Maintenance (Charts)
16. Head of Implementation
17. Supportive Implementation Staff
18. Draughtsman
19. Drawing Office
20. Office Superintendent
21. Officer in Charge of Main Registry
22. Main Registry
23. Officer in Charge of Personnel Registry
24. Personnel Registry
25. Accounts Assistant
26. Accounts Registry
27. Cash Office
28. Supplies Officer
29. Stores Registry
30. Head of Mechanical Electrical Workshop
31. Transport Officer
32. Officer incharge of Mechanical
33. Officer incharge of Electrical
34. Training Co-ordinator
35. Head of Planning and Design
36. Supportive Planning and Design staff
37. Head of Administration
38. Personnel Matters Typists
39. Technical matters Typists
40. Typing Pool
41. Officer incharge of Survey.

OFFICE ACCOMMODATION KAKAMEGA DISTRICT ACCOMMODATION

| | Office N ^o |
|-----------------------------------|-----------------------|
| 1. District Water Egnineer | - 1 |
| 2. Secretary's Office | - 2 |
| 3. Deputy District Water Egnineer | - 3 |
| 4. Head of O&M | - 4 |
| 5. O&M General Office | - 5 |
| 6. P&D Office (General) | - 6 |
| 7. Head of Planning and Design | - 7 |
| 8. Head of Implementatio | - 8 |
| 9. Drawing Office | - 9 |
| 10. Survey Assistant | - 10 |
| 11. Geologist | - 11 |
| 12. Hydrologist | - 12 |
| 13. Asst. Hydrlogist | - 13 |
| 14. Hydrologists Asst. | - 14 |
| 15. Senior Water Bailiff | - 15 |
| 16. Water Bailiff | - 16 |
| 17. Water Bailiff Asst. | - 17 |
| 18. Executive Asst. | - 18 |
| 19. Personnel Registry | - 19 |
| 20. Personnel Asst. | - 20 |
| 21. General Registry | - 21 |
| 22. Accounts Asst. | - 22 |
| 23. Accounts Registry | - 23 |
| 24. S. Inspector General Office | - 24 |
| 25. Senior Inspector | - 25 |
| 26. Telephone Exchange | - 26 |
| 27. Typing Pool | - 27 |
| 28. Spplies Asst. | - 28 |
| 29. Storeman | - 29 |
| 30. Artisan General Office | - 30 |
| 31. DDA Staff Office | - 31-38 |
| 32. Ware House | - 3 |

INVENTORY FOR OFFICE FURNITUREI STOREY BUILDINGGround Floor**MR. AJEVI/ADAM'S OFFICE**

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 2 |
| 2. | Buffalo wheel chair..... | 2 |
| 3. | Barkley arm chair..... | 2 |
| 4. | Filling cabinet..... | 2 |
| 5. | Metal Tray..... | 1 |
| 6. | Wooden shelf long..... | 2 |
| 7. | Dust bin (steel)..... | 1 |

MR. JUHA'S OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal Office desk..... | 2 |
| 2. | Buffalo wheel chair..... | 2 |
| 3. | Barkley arm chair..... | 1 |

MR. S. ONYANGO/SIMBA'S OFFICE

| | | |
|----|--------------------------------------|---|
| 1. | Double pedestal office desk..... | 2 |
| 2. | New york executive chair..... | 1 |
| 3. | Buffalo wheel chair..... | 1 |
| 4. | Barkley arm chair..... | 1 |
| 5. | Steel filling cabinet..... | 1 |
| 6. | Wooden shelf (long)..... | 1 |
| 7. | Wooden cabinet with slide doors..... | 1 |
| 8. | Metal dustbin..... | 1 |

MR. OCHIENG'S OFFICE

| | | |
|----|-------------------------------------|---|
| 1. | Double pedestal office desk..... | 2 |
| 2. | Buffalo wheel chair..... | 2 |
| 3. | Barkley arm chair..... | 1 |
| 4. | Visitors chair..... | 1 |
| 5. | Plastic Trays..... | 2 |
| 6. | Wooden shelf long..... | 1 |
| 7. | Wooden shelf fixed on the wall..... | 1 |

UPPER STOREY**MR. WANZALA'S OFFICE**

| | | |
|----|-------------------------------------|---|
| 1. | Double pedestal office desk..... | 2 |
| 2. | Buffalo wheel chair..... | 2 |
| 3. | Barkley arm chair..... | 2 |
| 4. | Conference lable..... | 1 |
| 5. | Wooden shelf..... | 1 |
| 6. | Wooden shelf fixed on the wall..... | 1 |
| 7. | Steel cupboard small..... | 1 |

MR. ALI MOHAMED'S OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | New york executive chair..... | 1 |
| 3. | Barkley arm chair..... | 2 |
| 4. | Cafalina visitor's chair..... | 4 |
| 5. | Steel cupboard long..... | 1 |
| 6. | Plastic trays..... | 3 |
| 7. | Dustbin (metal)..... | 1 |

MR. BARNO/OKOCH'S OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 2 |
| 2. | New york executive chair..... | 1 |
| 3. | Buffalo wheel chair..... | 1 |
| 4. | Barkley arm chair..... | 3 |
| 5. | Wooden shelf long..... | 1 |
| 6. | Wooden wall pined shelf..... | 1 |
| 7. | Metal dustbin..... | 1 |

TYPING POOL OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 2 |
| 2. | Typist desk..... | 1 |
| 3. | Buffalo wheel chair..... | 2 |
| 4. | Visitors chair..... | 2 |
| 5. | Filling cabinet steel..... | 1 |
| 6. | Wooden shelf (long)..... | 1 |
| 7. | Steel dustbin..... | 1 |

APPENDIX 4

MR. OMOLO'S OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 2 |
| 2. | Buffalo wheel chair..... | 2 |
| 3. | Barkley arm chair..... | 2 |
| 4. | Filling steel cabinet..... | 1 |
| 5. | Wooden shelf (long)..... | 1 |
| 6. | Plastic dustbin..... | 1 |
| 7. | Metal trays..... | 2 |

M/S FLORA'S OFFICE

| | | |
|----|--------------------------------------|---|
| 1. | L. Shopped double pedestal desk..... | 1 |
| 2. | Buffalo wheel chair..... | 1 |
| 3. | Cafalina visitors chair..... | 4 |
| 4. | Steel cupboard..... | 1 |
| 5. | Steel filling cabinet..... | 1 |
| 6. | Metal trays..... | 3 |
| 7. | Metal dustbin..... | 1 |

MR. P. SARKKINEN OFFICE

| | | |
|-----|--------------------------------------|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | Conference table..... | 1 |
| 3. | New york executive wheel chair..... | 1 |
| 4. | Steel filling cabinet..... | 2 |
| 5. | Steel cupboard..... | 1 |
| 6. | Wooden shelf on the wall..... | 1 |
| 7. | Metal trays..... | 2 |
| 8. | Metal dustbin..... | 1 |
| 9. | Cafalina visitors chair..... | 6 |
| 10. | Wooden cabinet with slide doors..... | 1 |

II ADMINISTRATION BLOCK (BUILDING)Conference Room

| | | |
|----|----------------------------------|----|
| 1. | Conference table..... | 4 |
| 2. | Barkley arm chair..... | 12 |
| 3. | Buffalo wheel chair..... | 2 |
| 4. | Visitor's chair..... | 5 |
| 5. | Plastic chair..... | 1 |
| 6. | Single pedestal office desk..... | 1 |
| 7. | Wooden large cupboard..... | 1 |

MR. KOKO'S OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | Barkley arm chair..... | 1 |
| 3. | Typist chair..... | 1 |
| 4. | Steel cupboard (long)..... | 2 |
| 5. | Wooden shelf (long)..... | 3 |

EXCHANGE ROOM OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | Typist chair..... | 2 |
| 3. | Steel cupboard (long)..... | 2 |
| 4. | Plastic dustbin..... | 1 |

M/S JAEL/CARO'S OFFICE

| | | |
|----|--|---|
| 1. | L. shaped double pedestal office desk... | 1 |
| 2. | Double pedestal office desk..... | 1 |
| 3. | Small computer table..... | 1 |
| 4. | Typist chair..... | 2 |
| 5. | Visitors chair..... | 2 |
| 6. | Plastic trays..... | 4 |

APPENDIX 4

FINANCE MANAGER'S OFFICE

| | | |
|-----|--------------------------------------|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | Wooden cabinet with slide doors..... | 2 |
| 3. | Wooden shelf..... | 1 |
| 4. | Steel cupboard..... | 1 |
| 5. | Typist table..... | 1 |
| 6. | Barkley arm chair..... | 2 |
| 7. | Visitors chair..... | 1 |
| 8. | Executive wheel chair..... | 1 |
| 9. | Plastic dustbin..... | 1 |
| 10. | Metal dustbin..... | 1 |

PHOTO COPYING OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | Typist chair..... | 1 |

MR. AMOS OFFICE

| | | |
|----|--------------------------------------|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | Typist chair..... | 1 |
| 3. | Barkley arm chair..... | 2 |
| 4. | Plastic chair..... | 1 |
| 5. | Steel cupboard (long)..... | 1 |
| 6. | Wooden cabinet with slide doors..... | 1 |
| 7. | Metal dustbin..... | 2 |
| 8. | Metal trays..... | 1 |

MR. MUGO/MWANGI'S OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 2 |
| 2. | Conference table..... | 1 |
| 3. | Typist chair..... | 3 |
| 4. | Metal dustbin..... | 1 |
| 5. | Metal trays..... | 1 |

MR. THOOKO'S OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 2 |
| 2. | Filling cabinet..... | 1 |
| 3. | Cafalina visitors chair..... | 1 |
| 4. | Typist chair..... | 1 |
| 5. | Wooden shelf..... | 1 |
| 6. | Metal dustbin..... | 1 |

APPENDIX 4

MR. KURTTO'S OFFICE

| | | |
|----|-------------------------------------|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | Buffalo wheel chair..... | 2 |
| 3. | Barkley arm chair..... | 1 |
| 4. | Steel cupboard..... | 1 |
| 5. | Typist chair..... | 1 |
| 6. | Metal dustbin..... | 1 |
| 7. | Trays metal..... | 1 |
| 8. | Wooden shelf fixed on the wall..... | 2 |

MR. ORANGI/ODHUONDO'S OFFICE

| | | |
|----|-----------------------------------|---|
| 1. | Double pedestal office chair..... | 2 |
| 2. | Buffalo wheel chair..... | 2 |
| 3. | Barkley arm chair..... | 1 |
| 4. | Cafalina visitors chair..... | 1 |
| 5. | Wooden shelf (long)..... | 1 |
| 6. | Metal dustbin..... | 1 |

MRS MURUNGA'S OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 2 |
| 2. | Typist chair..... | 1 |
| 3. | Visitors chair..... | 1 |
| 4. | Metal dustbin..... | 1 |

DRAWING OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 4 |
| 2. | Buffalo wheel chair..... | 1 |
| 3. | Barkley arm chair..... | 1 |
| 4. | Typist chair..... | 1 |
| 5. | Cafalina visitors chair..... | 5 |
| 6. | Wooden shelf..... | 5 |

MR. JARMO RAMO/ MUKWANA'S OFFICE

| | | |
|----|--|---|
| 1. | Executive double pedestal office desk..... | 1 |
| 2. | New york executive wheel chair..... | 1 |
| 3. | Barkley arm chair..... | 1 |
| 4. | Double pedestal office desk..... | 1 |
| 5. | Typing chair..... | 1 |
| 6. | Metal dustbin..... | 1 |

APPENDIX 4

MR. KENNEDY MAKOKHA'S OFFICE

| | | |
|----|--|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | New york executive wheel chair..... | 1 |
| 3. | Buffalo wheel chair..... | 1 |
| 4. | Barkley arm chair..... | 1 |
| 5. | Typist chair..... | 1 |
| 6. | Single pedestal small office desk..... | 1 |
| 7. | Steel filling cabinet..... | 2 |
| 8. | Wooden cabinet..... | 3 |
| 9. | Plastic tray..... | 5 |

MRS. MIIMA (PERSONNEL'S) OFFICE

| | | |
|----|-------------------------------------|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | New york executive wheel chair..... | 1 |
| 3. | Barkley arm chair..... | 2 |
| 4. | Cafalina visitors chair..... | 1 |
| 5. | Steel filling cabinet..... | 4 |
| 6. | Wooden shelf..... | 1 |
| 7. | Metal tray..... | 2 |
| 8. | Metal dustbin..... | 1 |

MR. JARMO HUKA'S OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | Typist chair..... | 1 |
| 3. | Wooden shelf..... | 1 |
| 4. | Plastic chair..... | 1 |
| 5. | Plastic trays..... | 3 |

MR. KIMETO'S OFFICE

| | | |
|----|--|---|
| 1. | Executive double pedestal office desk... | 1 |
| 2. | Executive wheel chair..... | 1 |
| 3. | Barkley arm chair..... | 4 |
| 4. | Steel cupboard..... | 1 |
| 5. | Steel filling cabinet..... | 1 |
| 6. | Wooden shelf (long)..... | 1 |
| 7. | Ordinary table..... | 1 |

SECRETARY'S OFFICE

| | | |
|----|--|---|
| 1. | L. shaped double pedestal office desk... | 1 |
| 2. | Typist chair..... | 1 |
| 3. | Visitors chair..... | 2 |
| 4. | Filling cabinet steel..... | 2 |
| 5. | Wooden shelf..... | 1 |
| 6. | Metal dust bin..... | 1 |
| 7. | Metal trays..... | 4 |
| 8. | Barkley arm chair..... | 2 |

PROJECT MANAGER'S OFFICE

| | | |
|----|--|---|
| 1. | Executive double pedestal office desk..... | 1 |
| 2. | Executive wheel chair..... | 1 |
| 3. | Barkley arm chair..... | 6 |
| 4. | Wooden cabinet with slide doors..... | 2 |
| 5. | Steel cupboard (long)..... | 1 |
| 6. | Wooden shelf..... | 1 |
| 7. | Plastic dustbin..... | 1 |
| 8. | Small wooden shelf..... | 1 |

MR. NYAKUNDI'S OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 2 |
| 2. | Buffalo wheel chair..... | 2 |
| 3. | Conference table..... | 1 |
| 4. | Typist chair..... | 2 |
| 5. | Wooden shelf..... | 1 |
| 6. | Metal dustbin..... | 1 |

III. COMMUNITY BLOCK

MR. LIPEYA'S OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 2 |
| 2. | Executive wheel chair..... | 1 |
| 3. | Buffalo wheel chair..... | 2 |
| 4. | Visitors chair..... | 1 |
| 5. | Metal dustbin..... | 1 |
| 6. | Trays..... | 4 |

MR. MUTUKU'S OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 2 |
| 2. | Buffalo wheel chair..... | 2 |
| 3. | Barkley arm chair..... | 1 |
| 4. | Single pedestal office desk..... | 1 |
| 5. | L. shaped double pedestal..... | 1 |
| 6. | Steel filling cabinet..... | 1 |
| 7. | Metal dustbin..... | 1 |
| 8. | Trays..... | 3 |

MR. MULESHE'S OFFICE

| | | |
|----|-----------------------------------|---|
| 1. | Double pedestal office desks..... | 2 |
| 2. | Buffalo wheel chairs..... | 2 |
| 3. | Barkley arm chair..... | 1 |
| 4. | Visitors chairs..... | 2 |
| 5. | Wooden shelf..... | 1 |
| 6. | Metal dustbin..... | 1 |
| 7. | Trays..... | 5 |

M/S HELLEN'S OFFICE

| | | |
|----|-------------------------------------|---|
| 1. | L. shaped pedestal office desk..... | 1 |
| 2. | Steel cupboard..... | 1 |
| 3. | Filling cabinet..... | 2 |
| 4. | Barkley arm chair..... | 4 |
| 5. | Typist chair..... | 1 |
| 6. | Trays..... | 2 |

M/S IKUMI'S OFFICE

| | | |
|----|-------------------------------------|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | L. shaped pedestal office desk..... | 1 |
| 3. | Barkley arm chair..... | 6 |
| 4. | New york executive wheel chair..... | 1 |
| 5. | Filling cabinet (steel)..... | 1 |
| 6. | Wooden shelf..... | 2 |
| 7. | Dustbin..... | 1 |

MR. SHABAN'S OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | Barkley arm chairs..... | 2 |
| 3. | New york executive chair..... | 1 |
| 4. | Wooden shelf..... | 5 |
| 5. | Dustbin..... | 1 |
| 6. | Trays..... | 3 |

MR. MUKWANA'S OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | Barkley arm chair..... | 1 |
| 3. | Buffalo wheel chair..... | 1 |
| 4. | Steel cupboard..... | 1 |
| 5. | Typist chair..... | 2 |

MR. ABWAO'S OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | Buffalo wheel chair..... | 1 |
| 3. | Barkley arm chair..... | 2 |
| 4. | Cafalina visitor's chair..... | 1 |
| 5. | Filling cabinet (steel)..... | 1 |
| 6. | Wooden shelf..... | 1 |
| 7. | Office trays..... | 2 |
| 8. | Steel filling cabinet..... | 1 |

MR. OMUSE'S OFFICE

| | | |
|----|-----------------------------------|---|
| 1. | Double pedestal office desks..... | 5 |
| 2. | Buffalo wheel chair..... | 1 |
| 3. | Executive wheel chair..... | 1 |
| 4. | Barkley arm chair..... | 1 |
| 5. | Typist chair..... | 1 |
| 6. | Dustbin..... | 1 |

KITCHEN

- | | | |
|----|---------------------|---|
| 1. | Plastic chairs..... | 6 |
|----|---------------------|---|

IV DISTRICT BASE - KAKAMEGA

MR. GEORGE OTIENO'S OFFICE

- | | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 2 |
| 2. | Buffalo wheel chair..... | 2 |
| 3. | Barkley arm chair..... | 1 |
| 4. | Visitor's chair..... | 2 |
| 5. | Wooden shelf..... | 1 |
| 6. | Dustbin..... | 1 |
| 7. | Wooden trays..... | 2 |

MR. WACHINA'S OFFICE

- | | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 2 |
| 2. | Buffalo wheel chair..... | 2 |
| 3. | Visitors chair..... | 3 |
| 4. | Steel filling cabinet..... | 1 |
| 5. | Wooden shelf..... | 1 |
| 6. | Dustbin..... | 1 |
| 7. | Wooden trays..... | 3 |

SECRETARY'S OFFICE

- | | | |
|----|-------------------------------------|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | Buffalo wheel chair..... | 1 |
| 3. | L. Shaped pedestal office desk..... | 1 |
| 4. | Steel filling cabinet..... | 1 |
| 5. | Steel cupboard..... | 1 |
| 6. | Visitors chair..... | 4 |
| 7. | Dustbin..... | 1 |
| 8. | Trays..... | 2 |

APPENDIX 4

MR. LOGAN/ADIKA'S OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | Buffalo wheel chair..... | 1 |
| 3. | Visitors chair..... | 6 |
| 4. | Filling cabinet (steel)..... | 1 |
| 5. | Conference..... | 1 |
| 6. | Wooden shelf..... | 1 |
| 7. | Dustbin..... | 1 |
| 8. | Trays..... | 1 |

M/S CHRISTINE/SIMIYU'S OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 5 |
| 2. | Buffalo wheel chair..... | 2 |
| 3. | Barkley arm chair..... | 4 |
| 4. | Dustbin..... | 2 |
| 5. | Trays..... | 4 |

MR. BARASA CHAUNGO'S OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | Executive wheel chair..... | 1 |
| 3. | Steel cupboard..... | 1 |
| 4. | Steel filling cabinet..... | 1 |
| 5. | Metal tray..... | 1 |
| 6. | Barkley arm chair..... | 3 |
| 7. | Visitors chair..... | 1 |

MR. OMINO'S OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | Buffalo wheel chair..... | 1 |
| 3. | Steel filling cabinet..... | 1 |
| 4. | Visitors chairs..... | 5 |
| 5. | Trays..... | 2 |

KITCHEN

| | | |
|----|---------------------|---|
| 1. | Plastic chairs..... | 2 |
|----|---------------------|---|

APPENDIX 4

MR. KATA/ATUYA'S OFFICE

- 1. Double pedestal office desk..... 2
- 2. Buffalo wheel chair..... 1
- 3. Visitors chair..... 1
- 4. Wooden trays..... 3
- 5. Plastic chair..... 1

GATE C

- 1. Single pedestal office desk..... 1
- 2. Barkley arm chair..... 1
- 3. Plastic chairs..... 2

GATE B

- 1. Plastic chairs..... 3

GATE A

- 1. Arm chair..... 1
- 2. Plastic chairs..... 3
- 3. Ordinary small table..... 1

V OTHER OFFICES

PIPE SCHEME STORE OFFICE

- 1. Double pedestal office desk..... 1
- 2. Single pedestal office desk..... 2
- 3. Small wooden table..... 1
- 4. Buffalo wheel chair..... 2
- 5. Barkley arm chair..... 3
- 6. Visitors chair..... 2
- 7. Wooden trays..... 5

DRILLING STORE OFFICE

- 1. Single pedestal office desk..... 2
- 2. Typist chair..... 1
- 3. Visitors chair..... 1
- 4. Plastic chair..... 3

APPENDIX 4

MECHANICAL STORE OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 3 |
| 2. | Buffalo wheel chair..... | 1 |
| 3. | Barkley arm chair..... | 1 |
| 4. | Conference table..... | 1 |
| 5. | Typist chair..... | 2 |
| 6. | Plastic chair..... | 1 |

MR. JABEL'S OFFICE

| | | |
|----|--------------------------------|---|
| 1. | Local made l. shaped desk..... | 1 |
| 2. | Typist chair..... | 1 |
| 3. | Plastic chair..... | 2 |

TRANSPORT OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 3 |
| 2. | Barkely arm chair..... | 2 |
| 3. | Typist chair..... | 2 |
| 4. | Executive wheel chair..... | 1 |
| 5. | Wooden shelf..... | 1 |
| 6. | Steel cupboard long..... | 1 |
| 7. | Steel cupboard small..... | 1 |
| 8. | Plastic chair..... | 1 |
| 9. | Trays..... | 3 |

CONTROL OFFICE

| | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 4 |
| 2. | Barkley arm chair..... | 2 |
| 3. | Buffalo wheel chair..... | 1 |
| 4. | Typist chair..... | 1 |
| 5. | Wooden shelf..... | 5 |
| 6. | Plastic chairs..... | 4 |

MR. MAMBOLEO'S OFFICE

| | | |
|----|-------------------------------------|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | Wooden shelf long..... | 1 |
| 3. | Wooden cupboard..... | 1 |
| 4. | Typist chair..... | 1 |
| 5. | Wooden shelf fixed on the wall..... | 1 |

APPENDIX 4

TOOL STORE'S OFFICE

- | | | |
|----|----------------------------------|---|
| 1. | Double pedestal office desk..... | 1 |
| 2. | Plastic chair..... | 2 |

ENGINE ROOM

- | | | |
|----|--------------------|---|
| 1. | Plastic chair..... | 1 |
| 2. | Typist chair..... | 1 |

HANDING OVER MEETING OF BUNGOMA DISTRICT BASE - 01/94

Date: 11th April, 1994
 Venue: District Water Engineer's Office.
 Time: 3:00 p.m.

Present:

- | | |
|------------------------|--|
| 1. Mr. G. K. Gaiko | District Water Engineer - Chairman. |
| 2. Mr. Pekka Sarkkinen | Head of Technical Department. |
| 3. Mr. Jarmo Rukka | Financial & Management Advisor. |
| 4. Mr. Maurice Barasa | Head of Bungoma District Base - Secretary. |

Agenda

1. General.
2. District Base Premises (Offices/Stores).
3. Machinery/Plant.
4. DDA Implementation.
5. Any Other Business.

1. GENERAL

- Services of Directly Employed Programme Staff will be terminated by end of April, 1994.
- Programme will continue giving support to the DDA implementation in the District upto end of 1994.

2. DISTRICT BASE PREMISES (OFFICES/STORES)

- Handing Over Certificates for the buildings will be prepared. Guarantee period for the construction contractor expired long time ago.
- Inventory of the Stores/Offices will be carried out this week and will be an annex of the Handing Over report.
- A decision on utilization of used handpumps and other construction materials in DDA implementation as a subsidy will be made by MoLRRWD.
- Security guards will be retained at the District till after the Handing Over of Programme vehicles/Machinery to GoK. However day-guard may be withdrawn.

3. MACHINERY / PLANT

- Compressors and tractors will handed over to MoLRRWD and their subsequent use / hire by contractors will follow guidelines/procedures formulated by MoLRRWD.
- District Water Engineer will take over the maintenance responsibility of vehicle/motorbikes after they are handed over and registered with GoK plates.

4. DDA IMPLEMENTATION

- Implementation of DDA will follow the guidelines outlined in the Project Document.
- District Water Engineer will continue with DDA on his own and Programme will continue paying contractors and supply of handpumps.
- Programme will continue providing transport facilities (Fuel and Maintenance) for DDA implementation upto end of 1994.
- Monthly Coordination meetings will continue as before.
- Programme will continue meeting the Telecommunication costs of District Base till end of 1994.

- Bungoma District DDA Task Force will continue giving support to Mt. Elgon District till end of 1994 pending a decision from the management.

5. ANY OTHER BUSINESS

- Chesikaki water supply will receive spare/fittings package from the programme during Handing Over of District Base.

6. DATE OF NEXT MEETING

Date: 9th May, 1994
Time 3:15 p.m.
Venue: District Water Engineer's Office.



Signed:
Maurice Barasa
Secretary.

Date: ..15-4-94.....

- CC. Project Manager.
Provincial Water Engineer.
Resident Engineer.
District Water Engineer - Mt Elgon District.

PROVINCIAL WATER LABORATORY EQUIPMENT INVENTORY

16/08/94

| <u>EQUIPMENT</u> | <u>MODEL</u> | <u>MANUFACTURER</u> | <u>QTY</u> |
|--|-----------------|--------------------------|------------|
| Incubators | B15 | Memmert | 1 |
| " | KB 1053V | Termaks | 1 |
| " | Serie 4000 | " | 2 |
| Autoclave | 34 - E | Santasalo-sohlberg Corp. | 1 |
| Water baths | 3043 | Labortectic | 4 |
| Microscopes | | | |
| (i) Wild M 3 B | M3B | Wild Heerbrugg | 1 |
| (ii) Laborlux S | 020 - 505.030 | Leitz Portugal | 1 |
| Weighing balance | A 210 P | Sartorius GMBH | 1 |
| Turbidity meter | 2100 A | Hach Co. | 1 |
| Conductivity meter | | | |
| (i) Range 0 - 20,000 us/cm | | Hach Co. | 1 |
| (ii) Palintest, range 199.9 us - 199.9 ms | | Palintest | 1 |
| Spectrophotometers | | | |
| (i) DR/2000 | 44800 -00 | Hach Co. | 2 |
| (ii) DR - El/1 (1206/10 - 20) | | " | 2 |
| (iii) Shimadzu | UV - 120 - 02 | Shimadzu Corp. | 1 |
| Filtration apparatus | | | |
| (i) Vacuum pumps | Sm 166692 | Sartorius GMBH | 3 |
| (ii) Filter funnel (Buchner type) | | " | 3 |
| Oven | UM 400 | Memmet | 1 |
| Electrical heating mantle | Nº 22 0198 | Selecta | 1 |
| " | EM E 605 CO/CE | Electromantle ME | 1 |
| Magnetic stirrer/hot plate | | | |
| (i) Stirrer | | Voss Instruments Ltd. | 1 |
| (ii) Stirrer/hot plate | MR 2002 | Heidolph | 1 |
| (iii) Heaters | | | 2 |
| pH meters | | | |
| (i) pH/ISE meter | 44700 | Hach Co. | 1 |
| (ii) HD 8602 | | Delta OHM | 1 |
| (iii) CG 820 | | Schott Geräte | 1 |
| Deionizer | Seradest S 1500 | Seral | 1 |
| Refrigerator | HIP - 365 | Helkama | 1 |
| Distiller | 6 - 03E | Finn - Aqua | 1 |
| Disolved Oxygen meter | CG867 | Scott - Gerate | 1 |

16/08/94

LIST OF TESTS THAT CAN BE CARRIED OUT IN THE PROVINCIAL WATER LABORATORY

| <u>TEST</u> | <u>UNITS</u> |
|------------------------|------------------------|
| Colour | mgpt/l |
| Turbidity | NTU |
| Permanganate no | mgMnO ₄ /l |
| Conductivity | μs/cm |
| Iron | mgFe/l |
| Manganese | mgMn/l |
| pH | - |
| Carbon dioxide | mgCO ₂ /l |
| Total hardness | mgCaCO ₃ /l |
| Total alkalinity | " |
| Chloride | mgCl/l |
| Flouride | mgF/l |
| Nitrite | mgNO ₂ /l |
| Nitrate | mgNO ₃ /l |
| Sulphate | mgSO ₄ /l |
| Orthophosphate | mgPO ₄ /l |
| Total suspended solids | mg/l |
| BOD 5 | mg/l |
| COD | mg/l |
| Oxygen | mgO ₂ /l |
| Total Coliforms | Colonies/100ml |
| Feacal Coliforms | " |
| Salmonella typhi | " |
| Residual Chlorine | mg/l |

DISTRICT LABORATORIES EQUIPMENT INVENTORY

16/08/94

Each of the three district (Bungoma, Busia, Vihiga) water laboratories has the following equipment

| <u>EQUIPMENT</u> | <u>MODEL</u> | <u>MANUFACTURER</u> | <u>QTY</u> |
|-------------------------|--------------|---------------------|------------------|
| pH meter with electrode | LI-10T | ELICO | 1 |
| Turbidity meter | 603501 | GENWAY | 1 |
| Incubator | KETAN | SHIVAWI LTD | 1 |
| Weighing Balance | C 305 - S | OHAUS | 1 |
| Conductivity meter | 44600 | HACH | 1 |
| Hot plate | B 210 | J.BIBBY LTD | 1 |
| Desicator | GLASWERK | WERTHEM | 1 |
| Refrigerator | YN 320 | YENMADE | 1 * Except Busia |

16/08/94

LISTS OF TESTS THAT CAN BE ANALYSED IN THE DISTRICT LABORATORIES**A: PHYSICO - CHEMICAL TESTS**

| <u>PARAMETER</u> | <u>UNITS</u> |
|---------------------------|-------------------------|
| 1. Turbidity | NTU |
| 2. pH | - |
| 3. Total Alkalinity | mg CaCO ₃ /l |
| 4. Total Hardness | " |
| 5. Conductivity | µs/cm |
| 6. Free Residual Chlorine | mg/l |

B: BACTERIOLOGICAL TESTS

| | |
|---------------------|-----------------|
| 1. Total Coliforms | Colonies/100mls |
| 2. Faecal Coliforms | " |
| 3. Salmonella typhi | " |

COMPUTER HARDWARE SUMMARY

| COMPUTERS | |
|--------------------------------|-----------------|
| <i>MODEL</i> | <i>QUANTITY</i> |
| DESKTOP | |
| Olivetti M380 (AT 386) | 1 |
| Compaq 286e (AT 286) | 15 |
| Compaq Deskpro 286 (AT 286) | 1 |
| Amstrad PC 1512 (XT) | 1 |
| PORTABLE | |
| Toshiba T2000 SX (AT 286) | 3 |
| Compaq LTE (AT 286) | 1 |
| PRINTERS & PLOTTERS | |
| Canon LBP 8 III (Laser) | 4 + 1 |
| Brother M4018 (Dot matrix) | 11 |
| Epson LQ 1050 (Dot matrix) | 1 |
| HP 7475A Plotter | 1 |
| OTHER ACCESSORIES | |
| Calcomp 9500 Digitizing Table | 1 |

COMPUTER HARDWARE

| EXISTING COMPUTERS | | | PROPOSAL FOR NEW COMPUTERS | |
|--|-----|--|---|-----|
| MODEL | QTY | PROPOSAL | MODEL | QTY |
| DESKTOP | | | AT 486 /66 Mhz | |
| Olivetti M380 (AT 386) - 4 Mb Ram, 80 Mb HD, 12" VGA Monitor - Maths coprocessor - 5¼" Drive not Reading - Otherwise in good condition | 1 | DRIVE TO BE REPAIRED/REPLACED, COMPUTER SOLD & TO BE REPLACED WITH AN AT 486 | - 8 Mb Ram (Expandable to 64 Mb on board) - 256 Mb HD - 128 Kb Cache Memory - Maths coprocessor - 14" SVGA (.28dpi) - 3.5" & 5.25" Floppy Drives - 101 Keys enhanced Keyboard - 1 Mb Video Memory - 1 Parallel & 2 Serial Ports - 5 Expansion Slots Free - Mouse with Pad - Windows 3.1 & Dos 6.2 - Keyboard Safeskin - At least 18 months warranty including parts & labour | 1 |
| Compaq 286e (AT 286) - 1 Mb Ram, 40 Mb HD, 12" VGA Monitor - in good condition | 8 | TO BE SOLD (IN TWO LOTS OF 4) | | |
| Compaq 286e (AT 286) - 1 Mb Ram, 40 Mb HD, 12" VGA Monitor - Maths coprocessor - 50 Mb Hardcard - Fading screen - otherwise working | 1 | SCREEN TO BE REPAIRED, COMPUTER SOLD & REPLACED WITH AN AT 486 | | |
| Compaq 286e (AT 286) - 1 Mb Ram, 40 Mb HD, 12" VGA Monitor - Maths coprocessor - 50 Mb Hardcard - Faded screen (Did not regain original colour after it was repaired) - otherwise in good condition | 1 | TO BE SOLD AS IS & REPLACED WITH AN AT 486 | AT 486 /40 Mhz | |
| Compaq Deskpro 286 (AT 286) - 1 Mb Ram, 40 Mb HD, 12" VGA Monitor - in good condition | 1 | TO BE SOLD | - 4 Mb Ram (Expandable to 64 Mb on board) - 256 Mb HD - 128 Kb Cache Memory - Maths coprocessor - 14" SVGA (.28dpi) - 3.5" & 5.25" Floppy Drives - 101 Keys enhanced Keyboard - 1 Mb Video Memory - 1 Parallel & 2 Serial Ports - 5 Expansion Slots Free - Mouse with Pad - Windows 3.1 & Dos 6.2 - Keyboard Safeskin - At least 18 months warranty including parts & labour | 2 |
| Amstrad PC 1512 (XT) - 640 Kb Ram, 20 Mb HD, 12" CGA Monitor - in good condition | 1 | TO BE SOLD | | |
| Compaq 286e (AT 286) - 1 Mb Ram, 40 Mb HD, 12" VGA Monitor - 3½" Drive not Reading - Otherwise in good condition | 1 | DRIVE TO BE REPAIRED/REPLACED & COMPUTER SOLD | AT 486 /33 Mhz | |
| Compaq 286e (AT 286) - 1 Mb Ram, 40 Mb HD, 12" VGA Monitor - 5¼" Drive not Reading - otherwise in good condition | 2 | DRIVES TO BE REPAIRED/REPLACED & COMPUTERS SOLD | - 4 Mb Ram (Expandable to 64 Mb on board) - 256 Mb HD - 128 Kb Cache Memory - Maths coprocessor - 14" SVGA (.28dpi) - 3.5" & 5.25" Floppy Drives - 101 Keys enhanced Keyboard - 1 Mb Video Memory - 1 Parallel & 2 Serial Ports - 5 Expansion Slots Free - Mouse with Pad - Windows 3.1 & Dos 6.2 - Keyboard Safeskin - At least 18 months warranty including parts & labour | 4 |
| Compaq 286e (AT 286) - 1 Mb Ram, 40 Mb HD, 12" VGA Monitor - Faded screen - Makes unusual beeping sound at boot time | 1 | BOTH SCREEN & COMPUTER TO BE REPAIRED & SOLD | | |
| Compaq 286e (AT 286) - 1 Mb Ram, 40 Mb HD, 12" VGA Monitor - Screen fades at times - otherwise working | 1 | SCREEN TO BE REPAIRED & COMPUTER SOLD | | |

APPLICATIONS CREATED IN THE PROGRAMME

| | | |
|---|-------|---|
| Water Point Register | ..... | 3400 boreholes, shallow wells & springs depth, pump, yield, location, etc. |
| - water points | | |
| - water quality samples | | |
| - water committees | | |
| Development Plan | ..... | up to year 2005, sub-location level |
| Water Source Coverage | ..... | on sub-location level, 410 sub-locations |
| Undeveloped Springs | ..... | 3300 known springs |
| Water Treatment Plants | ..... | 100 plants |
| - pumps | | |
| - electrical motors | | |
| - diesel engines | | |
| Water Treatment Plant Rehabilitation Costs | ..... | 450 records, sub-location approach |
| Manpower System | ..... | 1100 persons |
| Population Forecast | ..... | on sub-location level |
| Cash Ledger | ..... | for reporting and cost control |
| Invoice Control | ..... | LPO's, invoices and payments |
| Proforma Invoicing | ..... | Invoices and payments |
| Cost Control | ..... | budgeting and reporting |
| Store Control Systems | ..... | 6700 different items |
| Vehicle Cost System | ..... | 100 FINNIDA financed vehicles & m-bikes |
| Well Contractor System | ..... | 50 subcontractors |
| Payroll | ..... | 150 KFWWSP + 200 MoWD + 30 trainees |

FIELD INVESTIGATION SECTION

INVENTORY OF INSTRUMENTS TO BE HANDED OVER

| INSTRUMENT/TOOL | HO DATE | PWEO | DWEO KAKAMEGA | DWEO BUSIA | DWEO BUNGOMA | DWEO VIHIGA | DWEO MT ELGON | CONDITION |
|--|---------|------|------------------|---------------|-----------------|----------------|------------------|---|
| GEOPHYSICS | | | | | | | | |
| Abem Terraloc MK III (24 channel):- Seismograph Printer | DEC 94 | X | | | | | | Some channels defective Not working |
| Abem Trio 12 Channel seismograph | DEC 94 | X | | | | | | Under repair in Kisumu |
| Hammer seismics Machine | OCT 94 | X | | | | | | Fair |
| EM wadi machine | OCT 94 | X | | | | | | Good |
| OYO Geologger | DEC 94 | X | | | | | | Power winch not working |
| Garmin GPS 100 SRVY II unit | DEC 94 | X | | | | | | Good |
| TEST PUMPING | | | | | | | | |
| Test Pumping Unit Generator set TPU-02 Scrbmersible Pumps 2 No. GI pipes and associated tools | DEC 95 | X | | | | | | Good Good Fair |
| Well monitor machine | DEC 95 | X | | | | | | Good |
| TEST DRILLING TOOLS | | | | | | | | |
| 1 set heavy weight (6" diameter) | DEC 94 | X | | | | | | Fair |
| 3 sets medium weight (4" diameter) | APR 94 | | X | X | X | X | P | Worn out bolts and nuts to be replaced |
| 3 sets light weight (1" diameter) - | DEC 94 | | X | X | X | P | P | Only one bit. More to be bought/fabricated |

X = INSTRUMENT/TOOL AVAILABLE FOR HANDING OVER

P = PROPOSED (INSTRUMENT/TOOL TO BE BOUGHT/FABRICATED)

23.3.1994

OPERATION COSTS OF DRILLING RIG - ROTAMEC 50

Estimate for Monthly costs

| N ^o | Cost | Amount in Kshs. | |
|---|---|-------------------|-----------------|
| 1. | Maintenance of rig and equipment - spares and materials for rig, mudpump, compressor, welding machine etc | 80,000 | |
| 2. | Consumable tools - drilling bits, rods, barrels, spnners and bsic tools | 40,000 - 100,000* | |
| 3. | Fuel and Lubrication (R50 avg.in 1993) | 51,000 | |
| <hr/> Sub-total rig cost | | 171,000 | 171,000 |
| 4. | Lorry cost - each site requires 5-8/site lorry trips: avg.21shs/km | 80,000 | 231,000 |
| 5. | Land-Rover cost - one month avg.cost for one unit avg. 3300km x 8.3 shs/km | 27,000 | |
| <hr/> Sub-total supporting transport cost | | 107,000 | 107,000 |
| 6. | Personnel - Salaries, allowances, nightouts etc | 114,000 | |
| 7. | Accessories - protective clothing, detergents, etc | 10,000 | |
| <hr/> Sub-total labour and related cost | | 124,000 | 124,000 |
| 8. | Borehole materials - Casings, gravel chemicals etc. | 800,000 | 800,000 |
| <hr/> Grand total for monthly cost: | | | shs. 1,202,000 |
| | | | <hr/> 1,262,000 |

* Consumable tools can easily rise upto Kshs 100,000 due to drilling bits which are very expensive and break easily.

Monthly costs

This calculation is based on the realistic assumption of four drilling site being completed every month.

If the work is carried out with this rig, certain by-costs from transports, labour and labour-related will automatically follow, as estimated below.

Further, if drilling is done, casings and other materials will be needed for the hole. These costs are also estimated below.

The calculation ends up with a total of more than one million Kenya Shillings per month, by 1993 cost figure, but in 1994 and onwards, one million a month will certainly not be adequate.

The cost estimates of all spare parts is based on duty free prices also costs for use of vehicles base on the programme cost control reports, meaning actual costs based on duty free spares and 'service'.

Proposal

Referring to the cost estimates, high maintenance and running costs as well as our experience we propose drilling activities to be awarded to the private sector and the MoLRRWD to take the responsibility for borehole design and supervision of the works.

KFWWSP
 WATER SUPPLY DEVELOPMENT
 CAPITAL EXPENDITURE

| Water Supply | Total average Capital expenditure KES | Customer served, planned HD | Expenditure per Capita KES/HD |
|-------------------|---|-----------------------------------|-------------------------------------|
| Spring | 56,000 | 250 | 220 |
| Dugwell | 133,000 | 350 | 380 |
| Borehole Well | 480,000 | 350 | 1,370 |
| Pipe water system | | | |
| Surface water | 20,300,000 | 29,000 | 700 |
| Ground Water | 11,000,000 | 25,000 | 440 |
| Gravity | 11,000,000 | 24,000 | 460 |

Figures based on 1994 data

APPENDIX 11

KAKAMEGA DISTRICT BASE BUILDING COST VALUE ESTIMATE- NOVEMBER, 1993

The building are constructed on approximately 52m x 32m ground next to Ministry of Land Reclamation, Regional and Water Development/Kefinco Kakamega Town. They are permanent structures fenced partly with masonry wall and chain link fence. The compound has two main gates. Cost value estimate is categorically listed below as follows:-

| ITEM NO. | ASSET DESCRIPTION | AMOUNT | |
|----------|---|------------|-----|
| | | KSHS. | CTS |
| 1. | L-Shape masonry office block with asbestos cement roof, comprising 8 No. offices, a conference room and toilet facilities. | 1,600,000 | 00 |
| 2. | A right angled U-shaped masonry complex structure with asbestos cement roof, comprising with an office, material testing laboratory, timber store, woodwork workshop, metal rack store and toilet facilities. | 3,800,000 | 00 |
| 3. | A complex building measuring about 12mx44m made up partly with masonry work and I-beam pillars for open structures. The building houses go-down, general material store, welding workshop, equipment store and fabrication workshop | 6,000,000 | 00 |
| 4. | Masonry security gate house with asbestos cement roof | 48,000 | 00 |
| 5. | Ballast and building sand storage bays | 18,000 | 00 |
| 6. | Two number double opening metal gates | 36,000 | 00 |
| 7. | Fence in general terms | 150,000 | 00 |
| | Total = | 11,652,000 | 00 |

In addition to the above estimate, still yet to be valued, is the plot value and the present improvements taking in consideration the electrical, telephone and water supply services installation. Hence the actual practical value of the Kakamega District Base would be higher than the above estimate.