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MINISTRY OF NATURAL RESOURCES
DIRECTORATE OF WATER DEVELOPMENT

WATER AND ENVIRONMENTAL SANITATION PROGRAMME

UNIT COSTS FOR CONSTRUCTION WORKS

Programme Coordination Unit

December 1997

824UG97-14818

WATER

W1. HAND AUGERED SHALLOW WELLS

All costs in Ug. Shs

page 1

Description	Quantity	Unit	Unit cost	Total cost	Central	District	subcounty	Community	DONOR
Diesel	100	lt	1100	110000		0	22000	22000	66000
skilled labour	15	manday	10000	150000			50000	50000	50000
Mobilisation	4	manday	5000	20000	0	0	20000	0	0
Handpump: - above ground parts	1	each	165000	165000	0	0	0	0	165000
- U3 cylinder	1	each	52000	52000	0	0	0	0	52000
-3m long, 2.5" dia. pipe + conn. rod	3	each	40000	120000	0	0	0	0	120000
Construction materials:									
- cement	5	bag	13000	65000	0	0		0	65000
- gravel pack	3	tonne	25000	75000	0	0		75000	0
- sand	3	tonne	5000	15000	0	0		15000	0
- aggregate	1	tonne	20000	20000	0	0		20000	0
- hardcore	3	tonne	7000	21000	0	0		21000	0
Extras (transportation, O+M, etc)	lumpsum			100000	50000	50000		0	0
Unskilled labour	20	manday	2500	50000	0	0		50000	0
Supervision	4	manday	5000	20000		20000	0	0	0
TOTAL				983000	50000	70000	92000	253000	518000

W2. MOTOR-DRILLED SHALLOW WELLS

All costs in Ug. Shs

Description	Quantity	Unit	Unit cost	Total cost	Central	District	subcounty	Community	DONOR
Diesel	140	lt	1100	154000		0	22000	22000	110000
skilled labour	15	manday	10000	150000			50000	50000	50000
Mobilisation	4	manday	5000	20000	0	0	20000	0	0
Handpump: - above ground parts	1	each	165000	165000	0	0	0	0	165000
- U3 cylinder	1	each	52000	52000	0	0	0	0	52000
-3m long, 2.5" dia. pipe + conn. rod	3	each	40000	120000	0	0	0	0	120000
Construction materials:									
- cement	5	bag	13000	65000	0	0		0	65000
- gravel pack	3	tonne	25000	75000	0	0		75000	0
- sand	3	tonne	5000	15000	0	0		15000	0
- aggregate	1	tonne	20000	20000	0	0		20000	0
- hardcore	3	tonne	7000	21000	0	0		21000	0
Extras (transport, O+M, etc)	lumpsum			100000	50000	50000		0	0
Unskilled labour	20	manday	2500	50000	0	0		50000	0
Supervision	4	manday	5000	20000		20000	0	0	0
TOTAL				1027000	50000	70000	92000	253000	562000

W3. HAND-DUG SHALLOW WELLS

All costs in Ug. Shs

Description	Quantity	Unit	Unit cost	Total cost	Central	District	subcounty	Community	DONOR
Diesel	100	lt	1100	110000		0	22000	22000	66000
skilled labour	15	manday	10000	150000			50000	50000	50000
Mobilisation	4	manday	5000	20000	0	0	20000	0	0
Handpump: - above ground parts	1	each	165000	165000	0	0	0	0	165000
- U3 cylinder	1	each	52000	52000	0	0	0	0	52000
-3m long, 2.5" dia. pipe + conn. rod	3	each	40000	120000	0	0	0	0	120000
Construction materials:									
- concrete rings	30	no.	45000	1350000	0	0		0	1350000
- cement	8	bag	13000	104000	0	0		0	104000
- reinforcement bars	6	no.	12000	72000	0	0		0	72000
- welded mesh; 4'x8'	0.5	piece	30000	15000	0	0		0	15000
- gravel pack	3	tonne	25000	75000	0	0		75000	0
- sand	3	tonne	5000	15000	0	0		15000	0
- aggregate	1	tonne	20000	20000	0	0		20000	0
- hardcore	3	tonne	7000	21000	0	0		21000	0
Extras (transport, O+M, etc)	lumpsum			100000	50000	50000	0	0	0
Unskilled labour	30	manday	2500	75000	0	0	0	75000	0
Supervision	5	manday	5000	25000		25000	0	0	0
TOTAL				2489000	50000	75000	92000	278000	1994000

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W4. SPRINGS

All costs in Ug. Shs

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Description	Quantity	Unit	Unit cost	Total cost	Central	District	subcounty	Community	DONOR
Diesel	60	lit	1100	66000		0	0	22000	44000
skilled labour	5	manday	10000	50000	0	0		23000	27000
Mobilisation	4	manday	5000	20000	0	0	20000	0	0
Construction materials:									
- cement	10	bag	13000	130000	0	0			130000
- spring pipe	1	each	40000	40000	0	0		0	40000
- clay	1	tonne	25000	25000	0	0		25000	0
- sand	5	tonne	5000	25000	0	0		25000	0
- aggregate	2	tonne	20000	40000	0	0		40000	0
- hardcore	9	tonne	7000	63000	0	0		63000	0
Unskilled labour	30	manday	2500	75000	0	0		75000	0
Extras (transport, O+M, etc)				100000		50000	50000	0	0
Supervision	4	manday	5000	20000	0		20000	0	0
TOTAL				654000	0	50000	90000	273000	241000

W5. MOTOR-DRILLED DEEP WELLS

All costs in Ug. Shs

page 2

Description	Quantity	Unit	Unit cost	Total cost	Central	District	subcounty	Community	DONOR
community mobilisation	15	manday	5000	75000			75000		0
commitment to O + M of handpump				180000				180000	
hydrogeological surveys				300000					300000
movement of tools + equipment				500000	50000				450000
equipment and tools				1500000					1500000
consummables				2500000					2500000
labour for drilling	20	manday	30000	600000	150000				450000
pump testing				500000	150000				350000
Handpump: - above ground parts	1	each	160000	160000	0	0		0	160000
- U2 cylinder	1	each	52000	52000	0	0	0		52000
-3m long, 1.25" dia. pipe +conn.rod	14	each	23000	322000	0	0	0	0	322000
pump installation									
- sand	3	tonne	5000	15000	0	0		15000	0
- aggregate	1	tonne	20000	20000	0	0		20000	0
- hardcore	3	tonne	7000	21000	0	0		21000	0
- unskilled labour	20	manday	2500	50000				50000	
- skilled labour	8	manday	5000	40000			40000		
- transport				50000			50000		
quality assurance + certification*				890000	30000	60000			800000
TOTAL				7775000	380000	60000	165000	286000	6884000
TOTAL (Incl. 17% VAT)				9096750	1701750	60000	165000	286000	6884000

*Note: Private consultant to be responsible for hydrogeological survey, siting and supervision of drilling

W6. MOTOR-DRILLED EXTRA DEEP WELLS

All costs in Ug. Shs

Description	Quantity	Unit	Unit cost	Total cost	Central	District	subcounty	Community	DONOR
community mobilisation	15	manday	5000	75000			75000		0
commitment to O + M of handpump				180000				180000	
hydrogeological surveys				300000					300000
movement of tools + equipment				500000	50000				450000
equipment and tools				1500000					1500000
consummables				2500000					2500000
labour for drilling	20	manday	30000	600000	150000				450000
pump testing				500000	150000				350000
Handpump: - above ground parts	1	each	160000	160000	0	0		0	160000
- U2 extra deepwell cylinder	1	each	70000	70000	0	0	0		70000
-3m long, 1.25" dia. pipe +conn.rod	25	each	23000	575000	0	0	0	0	575000
pump installation									
- sand	3	tonne	5000	15000	0	0		15000	0
- aggregate	1	tonne	20000	20000	0	0		20000	0
- hardcore	3	tonne	7000	21000	0	0		21000	0
- unskilled labour	20	manday	2500	50000				50000	
- skilled labour	8	manday	5000	40000			40000		
- transport				50000			50000		
quality assurance + certification*				890000	30000	60000			800000
TOTAL				8046000	380000	60000	165000	286000	7155000
TOTAL (Incl. 17% VAT)				9413820	1747820	60000	165000	286000	7155000

*Note: Private consultant to be responsible for hydrogeological survey, siting and supervision of drilling

W7. RAINWATER TANK (in Ferrocement) (20 cu.m)

(1.6m radius, 2.5m height)

for Primary schools and Communities without other alternative sources

All costs in Ug. Shs

page 3

Description	Quantity	Unit	Unit cost	Total cost	Central	District	subcounty	Community	DONOR
Mobilisation	4	manday	5000	20000	0	0	20000	0	0
Cement	36	bag	13000	468000					468000
BRC mesh	1	30m-roll	200000	200000					200000
Chicken wire mesh	1	30m-roll	55000	55000					55000
coffee net	0.2	30m-roll	160000	32000					32000
reinforcement bar; 12mm dia.	2	12m-length	8000	16000					16000
reinforcement bar; 6mm dia.	2	12m-length	3000	6000					6000
sand	12	tonne	5000	60000	0	0		60000	0
aggregate	4	tonne	20000	80000	0	0		80000	0
hard core	10	tonne	7000	70000	0	0		70000	0
bricks	100	each	50	5000				5000	
eucalyptus poles; 3.5m long	15	each	1500	22500				22500	
sisal rope	1	25m-roll	4500	4500				4500	
binding wire	25	kg	1000	25000					25000
pipe; 3/4" dia.	0.6	6m-length	20000	12000					12000
pipe; 2" dia.	0.6	6m-length	50000	30000					30000
elbow; 3/4" dia.	1	each	2500	2500					2500
elbow; 2" dia.	1	each	4500	4500					4500
socket; 3/4" dia.	1	each	2500	2500					2500
socket; 2" dia.	2	each	3000	6000					6000
plug; 2" dia.	1	each	2500	2500					2500
lockable tap; 3/4" dia.	1	each	5000	5000					5000
hacksaw blade	1	each	1300	1300					1300
wire nail; 5"	2	kg	2000	4000					4000
angle bar; 1"x1"x1/8"	1	6m-length	10000	10000					10000
flat mild steel sheet; 4'x8'x1/8"	0.2	sheet	30000	6000					6000
polythene sheet; 1m wide	0.5	30m-roll	110000	55000					55000
gunny bags	50	each	1000	50000				50000	
oil paint, black, bituminous	1	4-lt tin	18000	18000					18000
brush; 4"	1	each	3000	3000					3000
skilled labour	50	manday	5000	250000			100000	150000	
unskilled labour	40	manday	2500	100000				100000	
transport, local materials	5	trip	25000	125000	0			125000	
transport, materials store to site	2	trip	70000	140000	70000	70000			
guttering (incl. labour)	lumpsum			150000				150000	
Supervision	5	manday	5000	25000		25000	0	0	0
TOTAL				2066300	70000	95000	120000	817000	964300
TOTAL (incl. 17% VAT)				2417571	421271	95000	120000	817000	964300

W8. RAINWATER TANK (in HDPE) (one unit of 10 cu.m)

for Primary schools and Communities without other alternative sources

Description	Quantity	Unit	Unit cost	Total cost	Central	District	subcounty	Community	DONOR
Mobilisation	4	manday	5000	20000	0	0	20000	0	0
HDPE tank; 10 cu.m	1	each	1730000	1730000					1730000
guttering (incl. labour)	lumpsum			150000				150000	
transport to site (allow use of district lorry)	300	lt-diesel	1050	315000	157500	157500			
construction of platform									
- cement	10	bags	13000	130000				130000	
- bricks	100	each	50	5000				5000	
- sand	2	tonne	5000	10000				10000	
- aggregate	1	tonne	20000	20000				20000	
- skilled labour	5	manday	5000	25000				25000	
- unskilled labour	10	manday	2500	25000				25000	
- local transport	2	trip	40000	80000	0			80000	
Supervision	5	manday	5000	25000		25000	0	0	0
TOTAL				2535000	157500	182500	20000	445000	1730000
TOTAL (incl. 17% VAT on tank only)				2829100	451600	182500	20000	445000	1730000

W9. UNDERGROUND RAINWATER TANK (in brickwork, with reinforcement) (50 cu.m) · (5.7m dia., 2m height)

Communities without other alternative sources

page 4

Description	Quantity	Unit	Unit cost	Total cost	Central	District	subcounty	Community	DONOR
Mobilisation	4	manday	5000	20000	0	0	20000	0	0
Excavation	110	cu.m	2500	275000					
sand	35	tonne	5000	175000	0	0		175000	0
aggregate	28	tonne	20000	560000	0	0		560000	0
hardcore	21	tonne	7000	147000	0	0		147000	0
bricks: 9"x5"x3"	8500	each	50	425000				425000	
Timber: - 12"x12"x1"	16	piece	6000	96000				96000	
- 12"x4"x2"	18	piece	4000	72000				72000	
eucalyptus poles, 3m long	60	each	1500	90000				90000	
reinforcement bars; 10mm dia.	900	m	625	562500					562500
cement	100	bag	13000	1300000					1300000
binding wire	14	kg	2000	28000					28000
nails; assorted	12	kg	1500	18000					18000
bituminous paint, black	20	lt	5000	100000					100000
GI pipe, 2" dia.	24	m	2500	60000					60000
GI pipe, 1.5" dia.	18	m	2000	36000					36000
HDPE pipe, 2.5" dia.	150	m	3500	525000					525000
GI bend, 1.5" dia.	4	each	1500	6000					6000
GI end cap, 2" dia.	1	each	4500	4500					4500
Handpump: - above ground parts	1	each	165000	165000	0	0	0	0	165000
- U3 cylinder	1	each	52000	52000	0	0	0	0	52000
-3m long, 2.5" dia. pipe + conn. rod	1	each	40000	40000	0	0	0	0	40000
pump installation	lumpsum			50000				50000	
skilled labour	30	manday	5000	150000				60000	90000
unskilled labour	120	manday	2500	300000				300000	
transport, local materials	5	trip	25000	125000	0			125000	
transport, materials store to site	2	trip	70000	140000	70000	70000			
guttering (incl. labour)	140	m	6000	840000				840000	
Supervision	20	manday	5000	100000		100000	0	0	0
TOTAL				6462000	70000	170000	130000	2920000	2897000
TOTAL (Incl. 17% VAT)				7560540	1168540	170000	130000	2920000	2897000

W10. RAINWATER TANK (in brickwork, with reinforcement) (25 cu.m)

(4m dia., 2m height)

for Primary schools and Communities without other alternative sources

Description	Quantity	Unit	Unit cost	Total cost	Central	District	subcounty	Community	DONOR
Mobilisation	4	manday	5000	20000	0	0	20000	0	0
sand	21	tonne	5000	105000	0	0		105000	0
aggregata	21	tonne	20000	420000	0	0		420000	0
hardcore	14	tonne	7000	98000	0	0		98000	0
bricks: 9"x5"x3"	5200	each	50	260000				260000	
Timber: - 12"x12"x1"	12	piece	6000	72000				72000	
- 12"x4"x2"	15	piece	4000	60000				60000	
eucalyptus poles, 3m long	30	each	1500	45000				45000	
reinforcement bars; 10mm dia.	600	m	625	375000					375000
cement	75	bag	13000	975000					975000
binding wire	14	kg	2000	28000					28000
nails; assorted	10	kg	1500	15000					15000
bituminous paint, black	20	lt	5000	100000					100000
GI pipe, 3/4" dia.	18	m	2500	45000					45000
GI pipe, 1.5" dia.	30	m	3300	99000					99000
GI elbow, 1.5" dia.	6	each	2000	12000					12000
GI end cap, 1.5" dia.	1	each	3000	3000					3000
GI reducer, 1.5"x3/4"	1	each	4000	4000					4000
GI tee, 3/4"	2	each	1500	3000					3000
GI elbow, 3/4"	6	each	1500	9000					9000
GI union, 3/4"	4	each	5000	20000					20000
gate valve, 3/4" dia.	1	each	20000	20000					20000
GI socket, 3/4" dia.	4	each	1500	6000					6000
lockable tap, 3/4"	3	each	5000	15000					15000
skilled labour	55	manday	5000	275000			110000	165000	
unskilled labour	100	manday	2500	250000				250000	
transport, local materials	3	trip	25000	75000	0			75000	
transport, materials store to site	2	trip	70000	140000	70000	70000			
guttering (incl. labour)	50	m	6000	300000				300000	
Supervision	10	manday	5000	50000		50000	0	0	0
TOTAL				3899000	70000	120000	130000	1850000	1729000
TOTAL (Incl. 17% VAT)				4561830	732830	120000	130000	1850000	1729000

W11. RAINWATER TANK (In brickwork, with reinforcement) (20 cu.m)

(3.6m dia., 2m height)

for Primary schools and Communities without other alternative sources

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Description	Quantity	Unit	Unit cost	Total cost	Central	District	subcounty	Community	DONOR
Mobilisation	4	manday	5000	20000	0	0	20000	0	0
sand	14	tonne	5000	70000	0	0		70000	0
aggregate	14	tonne	20000	280000	0	0		280000	0
hardcore	14	tonne	7000	98000	0	0		98000	0
bricks: 9"x5"x3"	3300	each	50	165000				165000	
Timber: - 12"x12"x1"	10	piece	6000	60000				60000	
- 12"x4"x2"	12	piece	4000	48000				48000	
eucalyptus poles, 3m long	20	each	1500	30000				30000	
reinforcement bars; 10mm dia.	485	m	625	303125					303125
cement	60	bag	13000	780000					780000
binding wire	10	kg	2000	20000					20000
nails; assorted	10	kg	1500	15000					15000
bituminous paint, black	20	lt	5000	100000					100000
GI pipe, 3/4" dia.	18	m	2500	45000					45000
GI pipe, 1.5" dia.	30	m	3300	99000					99000
GI elbow, 1.5" dia.	6	each	2000	12000					12000
GI end cap, 1.5" dia.	1	each	3000	3000					3000
GI reducer, 1.5"x3/4"	1	each	4000	4000					4000
GI tee, 3/4"	2	each	1500	3000					3000
GI elbow, 3/4"	6	each	1500	9000					9000
GI union, 3/4"	4	each	5000	20000					20000
gate valve, 3/4" dia.	1	each	20000	20000					20000
GI socket, 3/4" dia.	4	each	1500	6000					6000
lockable tap, 3/4"	3	each	5000	15000					15000
skilled labour	40	manday	5000	200000			80000	120000	
unskilled labour	80	manday	2500	200000				200000	
transport, local materials	2	trip	25000	50000	0			50000	
transport, materials store to site	2	trip	70000	140000	70000	70000			
guttering (incl. labour)	40	m	6000	240000				240000	
supervision	12	manday	5000	60000		60000	0	0	0
TOTAL				3115125	70000	130000	100000	1361000	1454125
TOTAL (incl. 17% VAT)				3644696	599571	130000	100000	1361000	1454125

W12. RAINWATER TANK (In brickwork, with reinforcement) (15 cu.m)

(3.1m dia., 2m height)

for Primary schools and Communities without other alternative sources

Description	Quantity	Unit	Unit cost	Total cost	Central	District	subcounty	Community	DONOR
Mobilisation	4	manday	5000	20000	0	0	20000	0	0
sand	12	tonne	5000	60000	0	0		60000	0
aggregate	12	tonne	20000	240000	0	0		240000	0
hardcore	10	tonne	7000	70000	0	0		70000	0
bricks: 9"x5"x3"	2800	each	50	140000				140000	
Timber: - 12"x12"x1"	7	piece	6000	42000				42000	
- 12"x4"x2"	10	piece	4000	40000				40000	
eucalyptus poles, 3m long	15	each	1500	22500				22500	
reinforcement bars; 10mm dia.	400	m	625	250000					250000
cement	50	bag	13000	650000					650000
binding wire	8	kg	2000	16000					16000
nails; assorted	8	kg	1500	12000					12000
bituminous paint, black	20	lt	5000	100000					100000
GI pipe, 3/4" dia.	18	m	2500	45000					45000
GI pipe, 1.5" dia.	30	m	3300	99000					99000
GI elbow, 1.5" dia.	6	each	2000	12000					12000
GI end cap, 1.5" dia.	1	each	3000	3000					3000
GI reducer, 1.5"x3/4"	1	each	4000	4000					4000
GI tee, 3/4"	2	each	1500	3000					3000
GI elbow, 3/4"	6	each	1500	9000					9000
GI union, 3/4"	4	each	5000	20000					20000
gate valve, 3/4" dia.	1	each	20000	20000					20000
GI socket, 3/4" dia.	4	each	1500	6000					6000
lockable tap, 3/4"	3	each	5000	15000					15000
skilled labour	30	manday	5000	150000			60000	90000	
unskilled labour	60	manday	2500	150000				150000	
transport, local materials	2	trip	25000	50000	0			50000	
transport, materials store to site	2	trip	70000	140000	70000	70000			
guttering (incl. labour)	35	m	6000	210000				210000	
supervision	10	manday	5000	50000		50000	0	0	0
TOTAL				2648500	70000	120000	80000	1114500	1264000
TOTAL (incl. 17% VAT)				3098745	520245	120000	80000	1114500	1264000

W13. RAINWATER TANK (in brickwork, with reinforcement) (10 cu.m)

(2.6m dia., 2m height)

for Primary schools and Communities without other alternative sources

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Description	Quantity	Unit	Unit cost	Total cost	Central	District	subcounty	Community	DONOR
Mobilisation	4	manday	5000	20000	0	0	20000	0	0
sand	12	tonne	5000	60000	0	0		60000	0
aggregate	10	tonne	20000	200000	0	0		200000	0
hardcore	7	tonne	7000	49000	0	0		49000	0
bricks: 9"x5"x3"	2600	each	50	130000				130000	
Timber: - 12"x12"x1"	5	piece	6000	30000				30000	
- 12"x4"x2"	8	piece	4000	32000				32000	
eucalyptus poles, 3m long	15	each	1500	22500				22500	
reinforcement bars: 10mm dia.	320	m	625	200000					200000
cement	40	bag	13000	520000					520000
binding wire	8	kg	2000	16000					16000
nails: assorted	8	kg	1500	12000					12000
bituminous paint, black	15	lt	5000	75000					75000
GI pipe, 3/4" dia.	18	m	2500	45000					45000
GI pipe, 1.5" dia.	30	m	3300	99000					99000
GI elbow, 1.5" dia.	8	each	2000	12000					12000
GI end cap, 1.5" dia.	1	each	3000	3000					3000
GI reducer, 1.5"x3/4"	1	each	4000	4000					4000
GI tee, 3/4"	2	each	1500	3000					3000
GI elbow, 3/4"	6	each	1500	9000					9000
GI union, 3/4"	4	each	5000	20000					20000
gate valve, 3/4" dia.	1	each	20000	20000					20000
GI socket, 3/4" dia.	4	each	1500	6000					6000
lockable tap, 3/4"	3	each	5000	15000					15000
skilled labour	20	manday	5000	100000			40000	80000	
unskilled labour	50	manday	2500	125000				125000	
transport, local materials	2	trip	25000	50000	0			50000	
transport, materials store to site	2	trip	70000	140000	70000	70000			
guttering (incl. labour)	30	m	6000	180000				180000	
supervision	6	manday	5000	30000		30000	0	0	0
TOTAL				2227500	70000	100000	60000	938500	1059000
TOTAL (incl. 17% VAT)				2606175	448675	100000	60000	938500	1059000

W14. RAINWATER JAR (in ferrocement) (1500 lt)

(1.1m dia., 1.6m height)

for Households without other alternative water sources ONLY

Description	Quantity	Unit	Unit cost	Total cost	Central	District	subcounty	Community	DONOR
Mobilisation	4	manday	5000	20000	0	0	20000	0	0
sand	2	tonne	5000	10000	0	0		10000	0
aggregate	0.5	tonne	20000	10000	0	0		10000	0
cement	5	bag	13000	65000					65000
binding wire	3	kg	2000	6000					6000
chicken mesh	10	m	1850	18500					18500
GI pipe, 1" dia.	2	m	2500	5000					5000
GI end cap, 1" dia.	1	each	1000	1000					1000
GI elbow, 1"	1	each	1000	1000					1000
GI socket, 1" dia.	2	each	1000	2000					2000
skilled labour	5	manday	5000	25000				25000	
unskilled labour	10	manday	2500	25000				25000	
transport, local materials	1	trip	25000	25000	0			25000	
transport, materials store to site	1	trip	70000	70000				70000	
guttering (incl. labour)	5	m	6000	30000				30000	
TOTAL				313800	0	0	20000	195000	98500

* Note: Allow profit margin of UgShs 30,000 per jar (as extra on this cost) if constructed by private sector.

W15. RAINWATER JAR (in ferrocement) (1000 lt)

(1m dia., 1.5m height)

for Households without other alternative sources ONLY

Description	Quantity	Unit	Unit cost	Total cost	Central	District	subcounty	Community	DONOR
Mobilisation	4	manday	5000	20000	0	0	20000	0	0
sand	1.5	tonne	5000	7500	0	0		7500	0
aggregate	0.4	tonne	20000	8000	0	0		8000	0
cement	4	bag	13000	52000					52000
binding wire	2	kg	2000	4000					4000
chicken mesh	10	m	1850	18500					18500
GI pipe, 1" dia.	2	m	2500	5000					5000
GI end cap, 1" dia.	1	each	1000	1000					1000
GI elbow, 1"	1	each	1000	1000					1000
GI socket, 1" dia.	2	each	1000	2000					2000
skilled labour	5	manday	5000	25000				25000	
unskilled labour	10	manday	2500	25000				25000	
transport, local materials	1	trip	25000	25000	0			25000	
transport, materials store to site	1	trip	70000	70000				70000	
guttering (incl. labour)	5	m	6000	30000				30000	
TOTAL				294000	0	0	20000	190500	83500

* Note: Allow profit margin of UgShs 25,000 per jar (as extra on this cost) if constructed by private sector.

W15. GRAVITY FLOW SCHEMES: Implementation

Cost for this and framework for contribution are scheme specific and are spelt out in detail in the scheme Proposal and Agreement.

W16. GRAVITY FLOW SCHEMES: Detailed design

costs are per KM

Description	Quantity	Unit	Unit cost	Total cost	Central	District	subcounty	Community	DONOR
Survey: - skilled labour (district off.)	2	manday	48000	96000		36000			60000
- unskilled labour	2	manday	2500	5000				5000	
Design: - skilled labour	4	manday	5000	20000					20000
Production of design document	lumpsum		10000	10000					10000
TOTAL				131000	0	36000	0	5000	90000

TRAINING AND CAPACITY BUILDING

(all costs in Ug Shs)

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No	Activity	Unit cost	Total cost	Source of funding			
				Subcounty	District	Central	DONOR
1	Advocacy - National <i>* This activity is initiated and funded by the Centre</i>						
2	Inter- District meeting (two meetings per year) <i>Objective: To review programme progress and workplans with district level officers. Participants should be those officers whose day-to-day activities affect implementation of WES programme and are partly/wholly responsible for implementation; eg CAO, ACAO i/c WES. Ch'man LC V sectoral committee i/c water +sanitation, LC V Chairman, etc.</i> <i>Attendance: - 55 participants for 10 districts, 8 national facilitators, 2 sessions / year</i> <i>Maxm. duration: 2 day</i>		11180000	0	2585000	450000	7905000
	Funding: - DSA allowance for 45 participants	48000	6480000	0	2430000		4050000
	- out of pocket allowance for 10 participants of host district	8000	180000				180000
	- DSA for 8 national facilitators	48000	1152000			432000	720000
	- performance allowance for 8 national facilitators	20000	280000				280000
	- DSA for 2 support staff	48000	288000			18000	30000
	- Teas for 70 ppts, facilitators and support staff	2000	560000				560000
	- fuel refund for district vehicles	100000	900000				900000
	- communication	lumpsum	150000				150000
	- hire of venue	lumpsum	100000		100000		
	- stationery	lumpsum	50000				50000
	- DSA for 14 drivers	25000	350000		35000		315000
	- fuel for facilitators; 400 lt diesel	1050	420000				420000
	- contingency, approx. 10%	lumpsum	250000				250000
3	Intra- District meeting (two meetings per county per year) <i>Objective: To review programme progress and workplans with subcounty level officers. Participants should be those officers whose day-to-day activities affect implementation of WES programme and are partly/wholly responsible for implementation; eg S/County Chief, LC3 Ch'mn Ch'man LC 3 sectoral committee i/c water +sanitation, CDA, HA, etc.</i> <i>Attendance: - 30 participants: 5ppts for each of 6 subcounties in a county; 4 district facilitators; 2 sessions / year</i> <i>Maxm. duration: 2 day</i>		2188500	480000	132500	0	1574000
	Funding: - DSA allowance for 30 participants	30000	900000	450000			450000
	- DSA for 4 district facilitators	30000	240000		120000		120000
	- fuel refund for district vehicles	100000	900000				900000
	- communication	lumpsum	10000		10000		
	- hire of venue	lumpsum	30000	30000			
	- stationery	lumpsum	50000				50000
	- DSA for district driver	25000	25000		2500		22500
	- fuel for facilitators; 30 lt diesel	1050	31500				31500
4	Advocacy - District (for new council) <i>Objective: To sensitise district level officers about WES Programme activities. Participants should be those officers whose day-to-day activities affect implementation of WES programme and are partly /wholly responsible for implementation; eg CFO, LC V subcommittee i/c water and sanitation, LC V Chairman, MPs, NGOs, opinion leaders, etc.</i> <i>Maxm. Attendance: - 50 participants (20 district based +30 councillors); 4 national facilitators</i> <i>Maxm. duration: 1 day</i>		2588000	0	830000	274000	1484000
	Funding: - DSA for 30 councillors	48000	1440000	0	540000		900000
	- Out of pocket allowance for district based staff	5000	100000		60000		40000
	- 4 national facilitators	48000	384000			144000	240000
	- Teas 50 ppts, facilitators and support staff	2000	100000				100000
	- transport refund for 30 councillors	5000	150000				150000
	- communication	lumpsum	100000		50000	50000	
	- hire of venue	lumpsum	100000		100000		
	- stationery	lumpsum	30000				30000
	- allowance for driver	4000	4000				4000
	- fuel; 180 lt diesel	1000	160000		80000	80000	
5	Advocacy - Subcounty (for new Councils) (costs are for ONE County) <i>Objective: To sensitise subcounty level officers about WES Programme activities. Participants should be those officers whose day-to-day activities affect implementation of WES programme and are partly/wholly responsible for implementation; eg S/County Chief, LC3 Ch'mn LC 3 sectoral committee i/c water +sanitation, CDA, HA, etc.</i> <i>Attendance: - 60 participants: 10ppts for each of 6 subcounties (for example) in a county; 4 district facilitators; to be organised on COUNTY basis.</i> <i>Maxm. duration: 1 day</i>		723000	210000	178000	0	335000
	Funding: - Out of pocket allowance for 60 participants	5000	300000	180000			120000
	- DSA for 4 district facilitators	30000	240000		120000		120000
	- correspondence	lumpsum	20000		20000		
	- hire of venue	lumpsum	30000	30000			
	- stationery	lumpsum	50000				50000
	- DSA for district driver	25000	50000		5000		45000
	- fuel for facilitators; 30 lt diesel	1100	33000		33000		
6	DMT meetings ('ordinary') <i>* Note:1. Ordinary DMT meetings for organising day-to day running of the programme are to be held monthly and are to be wholly funded by District</i> <i>2.Participants are ACAO i/c WES, Heads of Depts i/c WES, CDO, DHI, DWO, other district based junior officers implementing WES activities, representatives of participating NGOs, CAO, etc</i> <i>Duration: 1 day</i>		96000	0	96000	0	0
	Funding: - hire of venue	lumpsum	30000		30000		
	- stationery	lumpsum	15000		15000		
	- lunch for 15 participants and facilitators	2000	30000		30000		
	- fuel 20 lt diesel (for facilitators)	1050	21000		21000		

No	Activity	Unit cost	Total cost	Source of funding			
				Subcounty	District	Central	DONOR
7	DMT meetings ('extra-ordinary') <i>Objective: To make / finetune district annual and quarterly workplans with participation of subcounty planners + implementers. Duration: 1 day</i> <i>Participation: 6 DMT members, 2 or 3 representatives from each subcounty, 4repr. of NGOs, community based organisations, etc meeting quarterly.</i> <i>Facilitators: ACAO i/c WES, DHI, DWO, CDO.</i>		980000	175000	264000	175000	366000
	Funding: - out of pocket allowance for 70 participants (*take 20 s/c with 3pp each)	5000	350000		70000		280000
	- allowance for 4 facilitators	5000	20000		4000		16000
	- hire of venue	lumpsum	50000		50000		
	- stationery	lumpsum	70000				70000
	- lunch for 70 participants	2000	140000		140000		
	- transport refund for 60 participants	5000	350000	175000		175000	
8	District Sectoral Committee meetings <i>* Note: 1. Ordinary DSC meetings for organising day-to day running of the programme are to be held quarterly and are to be wholly funded by District</i> <i>2. Participants are LC Chairman, Ch'man sectoral committee i/c WES, CAO, ACAO i/c WES, Heads of Depts i/c WES, CDO, DHI, DWO, etc</i> <i>Duration: 1 day</i>		470000	0	320000	0	150000
	Funding: - out of pocket allowance for 10 participants	30000	300000		150000		150000
	- hire of venue	lumpsum	30000		30000		
	- stationery	lumpsum	15000		15000		
	- lunch for 10 participants and facilitators	2000	20000		20000		
	- fuel 100 lt diesel (for facilitators)	1050	105000		105000		
9	WES management - for district officers <i>Objective: To help districts improve on their management procedures eg. planning, finance, stores, etc</i> <i>Participation: ACAO i/c WES, Heads of Depts i/c WES, CDO, DHI, DWO, 3 district based junior officers.</i> <i>Duration: 1 day</i> <i>Facilitators: 2 national / district level</i>		481000	0	159000	147000	175000
	Funding: - out of pocket allowance for 10 participants	5000	50000		10000		40000
	- allowance for 2 facilitators	48000	192000			72000	120000
	- hire of venue	lumpsum	50000		50000		
	- stationery	lumpsum	15000				15000
	- lunch for all	2000	24000		24000		
	- fuel 150 lt diesel (for facilitators)	1000	150000		75000	75000	
10	WES Practical skills - for district officers <i>Objective: To impart needed practical skills to district officers eg. communication skills, gender analysis skills, augering of shallow wells, etc.</i> <i>Participation: ACAO i/c WES, CDO, DHI, DWO, 3 district based junior officers.</i> <i>Duration: 5 days</i> <i>Facilitators: 2 national / district level</i>		1221000	0	175000	326000	720000
	Funding: - out of pocket allowance for 7 participants	5000	175000		35000		140000
	- allowance for 2 facilitators	48000	578000			216000	360000
	- hire of venue	lumpsum	30000		30000		
	- stationery	lumpsum	20000				20000
	- lunch for all	2000	110000		110000		
	- fuel to transport participants, 100 lt diesel	1100	110000			110000	
	- fuel 200 lt diesel (for national facilitators)	1000	200000				200000
11	Inter - District Study Tour <i>Objective: To share experiences in programme implementation strategies.</i> <i>Participation: LC subcommittee i/c water and sanitation, LC V Ch'man, CAO, 3 technical staff, opinion leaders.</i> <i>Duration: 4 days</i> <i>Facilitators: 2 district level (host district)</i> <i>Maxm. Attendance: 8</i>		2390000	0	855000	0	1535000
	Funding: - allowance for participants	48000	1920000		720000		1200000
	- allowance for 2 drivers	25000	250000		25000		225000
	- fuel: 200 lt diesel	1100	220000		110000		110000
12	WES Planning skills - for County / Sub-county staff <i>Objective: To help subcounties improve on their planning skills with emphasis to participatory methodologies</i> <i>Participation: 30 participants: 5 from each s/cty (take 6 s/c per c'ty).</i> <i>Duration: 2 days</i> <i>Facilitators: 2 district level</i>		600000	120000	116000	0	364000
	Funding: - out of pocket allowance for 30 participants	5000	150000	90000			60000
	- allowance for 2 facilitators	48000	192000		72000		120000
	- hire of venue	lumpsum	30000	30000			
	- stationery	lumpsum	30000				30000
	- lunch for all	2000	64000				64000
	- transport refund for 30 participants	3000	90000				90000
	- fuel 40 lt diesel (for facilitators)	1100	44000		44000		
13	WES Management skills - for County / Sub-county staff <i>Objective: To help subcounties improve on their management procedures eg. finance, stores, etc</i> <i>Participation: 20 participants: 4 from each s/cty (take 5 s/c per county)</i> <i>Duration: 1 day</i> <i>Facilitators: 2 district level</i>		434000	134000	80000	0	220000
	Funding: - out of pocket allowance for 20 participants	5000	100000	60000			40000
	- allowance for 2 facilitators	48000	96000		36000		60000
	- hire of venue	lumpsum	30000	30000			
	- stationery	lumpsum	20000				20000
	- lunch for all	2000	44000	44000			
	- transport refund for 20 participants	5000	100000				100000
	- fuel 40 lt diesel (for facilitators)	1100	44000		44000		
14	WES Practical skills - for Extension staff <i>Objective: To impart needed practical skills to district officers eg. communication skills, gender analysis skills, augering of shallow wells, etc.</i> <i>Participation: 12 participants: as in 28 (b) but 2 participants / subcounty</i> <i>Duration: 6 days</i> <i>Facilitators: 2 district level officers.</i>		1454000	414000	328000	0	714000
	Funding: - out of pocket allowance for 12 participants	5000	360000	216000			144000
	- allowance for 2 facilitators	48000	578000		216000		360000
	- hire of venue	lumpsum	30000	30000			
	- stationery	lumpsum	40000				40000
	- lunch for all	2000	168000	168000			
	- transport refund for 12 participants	5000	60000				60000
	- fuel 200 lt diesel	1100	220000		110000		110000

TRAINING AND CAPACITY BUILDING (cont'd)

(all costs in Ug Shs)

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No	Activity	Unit cost	Total cost	Source of funding			
				Subcounty	District	Central	DONOR
15	WES management - Sub-county committee i/c WES <i>Objective: as in 28 (a) above but with emphasis on programme management.</i> <i>Participation: LC subcommittee i/c water and sanitation, LC III Ch'man, S/Cty chief, opinion leaders.</i> <i>Duration: 1 day</i> <i>Facilitators: 2 district/ subcounty level</i>		210000	50000	110000	0	50000
	Funding: - allowance for facilitators	48000	96000		66000		30000
	- hire of venue	lumpsum	30000	30000			
	- stationery	lumpsum	20000				20000
	- lunch for 10 participants	2000	20000	20000			
	- fuel 40 lt diesel for facilitators	1100	44000		44000		
16	Inter - Subcounty study tour. <i>Objective: To share experiences in programme implementation strategies.</i> <i>Participation: LC subcommittee i/c water and sanitation, LC III Ch'man, S/Cty chief, extension staff, opinion leaders.</i> <i>Duration: 2 day</i> <i>Maxm. Attendance: 10</i> <i>Facilitators: 2 district level</i>		723000	627000	66000	0	30000
	Funding: - allowance for 2 facilitators	48000	96000		66000		30000
	- allowance for participants and driver	25000	550000	550000			
	- fuel 70 lt diesel for facilitators	1100	77000	77000			
17	Operational skills - for spring, RWT, water jar, shallow well, latrine masons. <i>* This is for re-orientation of practising masons to acquire needed skills</i> <i>Maxm. Attendance: - 10 participants, 2 facilitators per session</i> <i>Maxm. duration: 6 days on-job</i>		724000	288000	0	0	436000
	Funding: - night allowance for 2 facilitator	48000	576000	216000	0		360000
	- lunch for all	1000	72000	72000			
	- stationery	lumpsum	10000				10000
	- fuel; 100 lt diesel	1100	66000				66000

No	Activity	Unit cost	Total cost	Source of funding				
				Community	Subcounty	District	Central	DONOR
18	Operational skills - hand-pump mechanics [ON SPECIAL REQUEST ONLY] <i>Maxm. Attendance: - 10 participants, 2 facilitators / session</i> <i>Maxm. duration: 10 days (4d theory, 6d on-job)</i>		1245000	60000	495000	0	375000	315000
	Funding: (* for training mechanics in areas with new wells only)							
	- night allowance for 2 facilitators	48000	960000		360000	0	300000	300000
	- lunch for all	1000	120000	60000	60000			
	- stationery	lumpsum	15000					15000
	- fuel; 150 lt diesel	1000	150000		75000		75000	
19	Operational skills - GFS artisans <i>Maxm. Attendance: - 8 participants, 2 facilitators / session</i> <i>* This is for re-orientation of practising masons - spring masons, RWT masons, general building/bricklaying masons</i> <i>Maxm. duration: 12 days on-job</i>		1314000	72000	482000	0	390000	390000
	Funding:							
	- night allowance for 2 facilitators	48000	1152000		432000	0	360000	360000
	- lunch for all	1000	72000	72000				
	- stationery	lumpsum	30000					30000
	- fuel; 60 lt diesel	1000	60000		30000		30000	
20	Operational skills - GFS Field Officers [ON SPECIAL REQUEST ONLY] <i>Maxm. Attendance: - 6 participants, 2 facilitators / session</i> <i>* This is for re-orientation of technicians with basic engineering training holding Certificate/Ordinary diploma in mechanical/civil/water engineering</i> <i>Maxm. duration: 18 days (6d theory, 12d practical)</i>		4578000	0	1080000	648000	590000	2260000
	Funding:							
	- night allowance for 6 participants	25000	2700000		1080000	0		1620000
	- night allowance for 2 facilitators	48000	1728000			648000	540000	540000
	- stationery	lumpsum	50000					50000
	- fuel; 100 lt diesel	1000	100000				50000	50000
21	Formation and Training of Water source committee and caretaker <i>Maxm. Attendance: - 9 participants (the LC exec. at that level), 2 facilitators / session</i> <i>* This is for re-orientation of LC Committee and caretaker to follow-up an O+M of the water source.</i> <i>Maxm. duration: 1 day</i>		38500	16500	20000	0	0	0
	Funding: - lunch for facilitators and participants	1500	16500	16500				
	- allowance for 2 facilitators	5000	10000		10000			
	- stationery	lumpsum	10000		10000			

Monthly SUPPORT FOR DISTRICT, COUNTY AND SUBCOUNTY STAFF FOR IMPLEMENTATION OF WES PROGRAMME ACTIVITIES.

No	Description	Unit	Unit cost	Total cost	Source of funding				
					Community	Subcounty	District	Central	DONOR
	District Staff			500000	0	0	202000	178000	120000
1	ACAO i/c WES: - night allowance	2	48000	96000			36000	30000	30000
	- diesel fuel	40	1100	44000			22000	22000	
2	District Health Inspector: - night allowance	2	48000	96000			36000	30000	30000
	- petrol fuel	20	1200	24000			12000	12000	
3	Community Dev't Officer: - night allowance	2	48000	96000			36000	30000	30000
	- petrol fuel	20	1200	24000			12000	12000	
4	District Water Dev't Officer: - night allowance	2	48000	96000			36000	30000	30000
	- petrol fuel	20	1200	24000			12000	12000	
	County Staff			111000	0	0	45000	0	66000
5	Health Inspector: - out of pocket allowance	5	5000	25000			15000		10000
	- petrol fuel	10	1200	12000					12000
6	CDA: - out of pocket allowance	5	5000	25000			15000		10000
	- petrol fuel	10	1200	12000					12000
7	Field Officer / CWO: - out of pocket allowance	5	5000	25000			15000		10000
	- petrol fuel	10	1200	12000					12000
	Subcounty Staff			150000	0	90000	0	0	60000
8	Subcounty Chief: - out of pocket allowance	10	5000	50000		30000			20000
9	Health Assistant: - out of pocket allowance	10	5000	50000		30000			20000
10	Community Dev't Assistant: - out of pocket allowance	10	5000	50000		30000			20000

INSTITUTIONAL LATRINE , 5 stance, In Permanent materials

Description	Unit	Quantity	Unit Cost	Total	Source of Funding				
					Community	Subcounty	District	GoU	DONOR
TOTAL				1228500	841500	55000	0	0	332000
Pit (6 x 0.6 x 15m deep)	m depth	10	15,000	150,000	150000				
Slabs(without vent), 120x80cm	each	5	40,000	200,000					200,000
Cement (50 kg bags)	bag	10	13,000	130,000	130000				
Sand	tonne	7	5,000	35,000	35000				
Aggregate	tonne	2	20,000	40,000	40000				
Bricks 9"x5"x5"	each	1500	50	75,000	75000				
Timber 4"x3"x3m	piece	15	4,000	60,000	60000				
Fuel (for transporting mats.)	lit D	100	1,100	110,000	55000	55000			
Supervision: - allowance	manday	4	5,000	20,000					20,000
- fuel	lit P	10	1,200	12,000					12,000
Doors	each	5	20,000	100,000	100000				
Corrugated Iron sheets, G32x10ft	each	8	8,000	64,000	64000				
Assorted nails	kg	3	2,500	7,500	7500				
Handwashing facilities	200lit can	1	25,000	25,000	25000				
Skilled labour	manday	20	5000	100,000					100,000
Unskilled labour	manday	40	2500	100,000	100000				