

**Table C3.3 (1/3) Key of headings of borehole data**

- (1) BORE H/NO : Borehole number 1000 = C1000
- (2) LONGITUDE : Longitude of borehole to nearest minute
- (3) LATITUDE : Latitude of borehole to nearest minute
- (4) DIRECTION : Latitude direction, i.e. a value reported as longitude 36.4, latitude -1.8 is read 36 degrees 24 minutes east longitude, 1 degree 48 minutes south latitude.
- (5) B/HOLE USE : A = Agricultural  
L = Livestock  
P = Public water supply  
I = Industrial/Commercial  
X = Exploratory  
B = Observation  
O = Others  
U = Unknown  
D = Domestic
- (6) B/HOLE OWNER : R = Rural  
C = Urban water suppl  
B = Observation, MOWD  
A = Range water, MOWD  
L = Livestock marketing division  
O = Other  
U = Unknown
- (7) ELEVATION : Ground surface elevation in meters(m)
- (8) TOTAL DEPTH : Total depth of well in meters(m)
- (9) HORIZONS NO : Number of producing horizons
- (10) ROCK TYPE :  
1 = Volcanic  
2 = Basement  
3 = Sedimentary  
4 = Volcanic over Basement  
5 = Sedimentary over Basement  
6 = Sedimentary over volcanic  
7 = Volcanic over Sedimentary  
8 = Others  
9 = Unknown

**DEPTH TO WATER LEVELS**

- (11) STRUCK DEPTH : Water struck depth in metres(m)
- (12) REST W. LEVEL : Rest water level depth in metres(m)

**Table C3.3 (2/3) Key of headings of borehole data**

**CASING/OPENINGS**

(13) DIAMETER CASE : Diameter at bottom in cm

(14) CASING TYPE : Type of openings. These codes are ;

H = Open hole  
P = Perfs or slots, gravelled  
R = Perfs or slots, not gravelled  
S = Screen, gravelled  
C = Screen, not gravelled  
B = Backfilled  
O = Others  
U = Unknown

(15) BASE CASING : Base blank in metres(m)

(16) LENGTH OPEN : Length of openings(cm)

(17) PUMPING TEST/NO : Pumping tests

**FINAL PUMPING TEST**

(18) DISCHARGE : Discharge in litres per minute(l/min)

(19) DRAWDOWN : Drawdown during the test in metres(m)

(20) PUMPING HOURS : Length of pumping in hours(hrs)

(21) RECOVERY : Length of recovery in hours(hrs)

**POTABILITY**

(22) The codes are :  
G = Good  
P = Saline, potable  
S = Saline, nonpotable  
U = Unknown

(23) B/HOLE STATUS : Status of the borehole; codes are :

C = Completed/in use  
A = Abandoned  
L = Abandoned after service  
S = Abandoned but serviceable  
U = Unknown

(24) COMPLETE YEAR : Year completed

(25) COMPLETE MONTH : Month completed

Table C3.3 (3/3) Key of headings of borehole data

(26) MONITORING : Monitoring frequency; the codes are:

N = Never

Y = Yearly or less frequent

M = More frequent than yearly

F = Formerly but not now

U = Unknown

(27) DISTRICT CODES are as follows:

11 Nairobi	61 Kisii
21 Kiambu	62 Kisumu
22 Kirinyaga	63 Siaya
23 Muranga	64 South Nyanza
24 Nyandarua	
25 Nyeri	
	71 Baringo
	72 Elgeyo Marakwet
	73 Kajiado
31 Kilifi	74 Kericho
32 Kwale	75 Laikipia
33 Lamu	76 Nakuru
34 Mombasa	77 Nandi
35 Taita Taveta	78 Narok
36 Tana River	79 Samburu
	81 Trans-Nzoia
41 Embu	82 Turkana
42 Isiolo	83 Uasin Gishu
43 Kitui	84 West Pokot
44 Machakos	
45 Marsabit	
46 Meru	91 Bungoma
	92 Busia
	93 Kakamega
51 Garissa	
52 Mandera	
53 Wajir	

(28) QUADRAT : Quadrat of a map

(29) MAP SHEET NO : Map reference number

(30) DRAINAGE AREA : Hydrological catchment e.g. 4ED  
refers to drainage area 4, basin E, subbasin D.

**Table C3.4 Information codes for a groundwater quality datum**

No	Parameter	Type of data	Unit	Data description
1	ID	NUMBER(5)		Borehole No.
2	SDATE	DATE,		Sample Date
3	RDATE	DATE,		Report Date
4	TMP	NUMBER(6),	degree	Temperature
5	CLR	NUMBER(6),	TCU	Colour
6	EC	NUMBER(6),	micro S/cm	Electric Conductivity
7	TB	NUMBER(6),	NTU	Turbidity
8	PH	NUMBER(6),		Potential of Hydrogen
9	BOD	NUMBER(6),	mg/l	Biochemical Oxygen Demand
10	COD	NUMBER(6),	mg/l	Chemical Oxygen Demand
11	TDS	NUMBER(6),	mg/l	Total Dissolved Solid
12	TSS	NUMBER(6),	mg/l	Total Suspended Solid
13	PNO	NUMBER(6),	mg/l	Permanganate No.
14	CH	NUMBER(6),	mg/l	Carbonate Hardness
15	NCH	NUMBER(6),	mg/l	Non Carbonate Hardness
16	TH	NUMBER(6),	mg/l	Total Hardness
17	TA	NUMBER(6),	mg/l	Total Alkalinity
18	TN	NUMBER(6),	mg/l	Total Nitrogen
19	CO2	NUMBER(6),	mg/l	Free Carbon Dioxide
20	CO3	NUMBER(6),	mg/l	Carbonate
21	HCO3	NUMBER(6),	mg/l	Bicarbonate
22	NH4	NUMBER(6),	mg/l	Ammonia
23	NO2	NUMBER(6),	mg/l	Nitrate
24	NO3	NUMBER(6),	mg/l	Nitrite
25	O2	NUMBER(6),	mg/l	Dissolved Oxygen
26	PO4	NUMBER(6),	mg/l	Phosphate
27	SO4	NUMBER(6),	mg/l	Sulphate
28	SIO2	NUMBER(6),	mg/l	Silica
29	AL	NUMBER(6),	mg/l	Aluminum
30	ASX	NUMBER(6),	mg/l	Arsenic
31	B	NUMBER(6),	mg/l	Boron
32	BA	NUMBER(6),	mg/l	Barium
33	CA	NUMBER(6),	mg/l	Calcium
34	CD	NUMBER(6),	mg/l	Cadmium
35	CL	NUMBER(6),	mg/l	Chloride
36	CU	NUMBER(6),	mg/l	Copper
37	CR	NUMBER(6),	mg/l	Chromium
38	F	NUMBER(6),	mg/l	Fluoride
39	FE	NUMBER(6),	mg/l	Iron
40	HG	NUMBER(6),	mg/l	Mercury
41	K	NUMBER(6),	mg/l	Potassium
42	MG	NUMBER(6),	mg/l	Magnesium
43	MN	NUMBER(6),	mg/l	Manganese
44	NA	NUMBER(6),	mg/l	Sodium
45	PB	NUMBER(6),	mg/l	Lead
46	SS	NUMBER(6),	mg/l	Selenium
47	Z	NUMBER(6),	mg/l	Zinc

Table C3.5 (1/9) Present abstraction rate and utilization ratio

B/H no.	District	Location	Initial yield (l/min)	yield (m <sup>3</sup> /day)	Observed (m <sup>3</sup> /day)	Utilization ratio
C0955	11	Muthaiga	124	178.6	70.0	0.39
C1245	11	Karen	136	195.8	40.0	0.20
C2373	11	Dagoretti Corner	114	164.2	45.0	0.27
C2781	11	Dandora	227	326.9	70.0	0.21
C3001	11	Nairobi Natl. Park	181	260.6	50.0	0.19
C4190	11	Karen			20.0	
C4549	11	Kabete	100	144.0	115.0	0.80
C4663	11	Kiluf Rd, Ind. Area	59.7	86.0	86.0	1.00
C4862	11	Embakasi				
C6228	11	Ruai	151	217.4	87.0	0.40
C6310	11	South C	100	144.0	13.0	0.09
C6689	11	Parliament Bldgs.				
C3710	21	Sigona	271	390.2	25.0	0.06
C4802	21	Kikuyu			192.0	
C5787	21	Limuru	122	175.7	264.0	1.50
C6259	21	Tigoni			120.0	
C6635	21	Rulru	757	1090.1	21.0	0.02
C7295	21	Kiambaa	424	610.6	240.0	0.39
C9746	21	Kasarani			192.0	
C3584	22	Sagana				
C4318	22	Inoi	151	217.4	60.0	0.28
C4960	22	Kithago				
C5998	22	Murinduko				
C6900	22	Kagio				
C7458	22	Mutira			40.5	
C0724	23	Mitubiri	164	236.2	60.0	0.25
C3876	23	Murang'a T.				
C4571	23	Maragua Mrkt.				
C5326	23	Mitubiri-Makuyu			11.0	
C6264	23	Galchanyiru	38	54.7	40.0	0.73
C9172	23	Makuyu School			21.0	
C1299	24	Ndaragwa	18	25.9	19.2	0.74
C1830	24	Kinangop				
C2264	24	Magumu	68	97.9	2.9	0.03
C3779	24	Oi Kalou	228	328.3	220.0	0.67
C6810	24	Gathimu				
C7842	24	Nyakambi Sec. Sch.				
C4629	25	Kingongo				
C6900	25	Nanyuki			4.8	
C9170	25	Munyu				
Giat.	25	Giathogu				
Kabaru	25	Kabaru			12.0	
Karem	25	Karemeno			15.0	
Baric	31	Bungale			29.0	
C0575	31	Mazeras				
C0848	31	Ganda				
C0996	31	Mangea I				
C0997	31	Mangea II	9	13.0	12.0	0.93
C1010	31	Jika Ndigiria				
C1024	31	Gade	2	2.9	2.0	0.69
C1035	31	Kaloleni	178	258.3		
C1041	31	Marafa	45	64.8	82.0	1.27
C1047	31	Kaloleni				
C1048	31	Kaloleni				
C1866	31	Bararini				
C2501	31	Jariburi				
C3174	31	Vipingo				
C3186	31	Tezo				
C3264	31	Tezo				
C3303	31	Mnarani				
C3332	31	Tezo				
C4300	31	Vitangani				
C4358	31	Mnarani				
C4422	31	Ganze				
C4596	31	Jilore			3.3	
C4813	31	Magarini				

Table C3.5 (2/9) Present abstraction rate and utilization ratio

B/H no.	District	Location	Initial yield (l/min)	yield (m3/day)	Observed (m3/day)	Utilization ratio
C4908	31	Handu-(Magarini)				
C4937	31	Marikabuni-(Magarini)	200	288.0	80.0	0.28
C5231	31	Marafa-(Magarini)			96.0	
C6072	31	Kikambala				
C6315	31	Ganda				
C6337	31	Ganda				
C6646	31	Tezoroka				
C9400	31	Malindi Prison				
P0091	31	Bamba				
C4166	32	LungaLunga				
C4240	32	Diani	800	1152.0	310.0	0.27
C4570	32	Tiwi			744.0	
C4977	32	Milewa				
C5770	32	Kinondo			19.0	
C6042	32	kinondo	60	86.4	21.6	0.25
C6498	32	Mwereni				
C6505	32	MwakiJembe			18.0	
C6507	32	Kaagani			17.3	
C6530	32	Mwangoni Sch.			17.3	
C6597	32	Bomani			17.3	
C6604	32	Mwereni 'B'			15.8	
C6671	32	Kikoneni			17.3	
C6716	32	Pongwe			15.8	
C6723	32	Urma Mrkt.			17.3	
C7264	32	Pongwe	96	138.2	29.0	0.21
C7354	32	Kikoneni			21.6	
C7356	32	Kikoneni			15.0	
C7362	32	Msambweni			17.3	
C7371	32	Kikoneni			14.4	
C7587	32	Lunga Lunga			17.3	
C7602	32	Msambweni			19.4	
C7615	32	Diani			9.6	
C8187	32	Diani	48	69.1	17.3	0.25
C8193	32	Lukore	57	82.1	17.3	0.21
C8206	32	Diani	30	43.2	19.4	0.45
C8646	32	Tiwi	38	54.7	17.3	0.32
C8669	32	Tiwi 3 No4			500.0	
C8670	32	Tiwi 3 No5	46	66.2	480.0	7.25
C8684	32	Lukore			17.3	
C9034	32	Ngombeni				
C9041	32	Manganani				
C3463A	33	Witu				
C3463B	33	Witu				
C3593	33	Munimbi				
C3594	33	Bargoni				
C7345	33	Mpeketoni	368	529.9	9.0	0.02
C7346	33	Mpeketoni				
Mombasa	34					
C0535	35	Taveta	315	453.6	150.0	0.33
C0561	35	Taveta	226	325.4	230.0	0.71
C0568	35	Taveta	315	453.6	150.0	0.33
C0936	35	Bura Maktao				
C0938	35	Ghazi				
C3146	35	Tsavo West P				
C3151	35	Tsavo North Park				
C3168	35	Tsavo West P	38	54.7	18.7	0.34
C3197	35	Taveta				
C3220	35	Vol Sias				
C3357	35	Lualenyi Ranch				
C3360	35	Lualenyi Ranch	182	262.1	49.0	0.19
C3381	35	Tsavo Rhino	205	295.2	12.0	0.04
C3783	35	Bura-Maktau				
C4103	35	Lualenyi Ranch				
C4130	35	Taveta	397	571.7		
C4203	35	Mwatate	113	162.7	30.2	0.19
C4218	35	Mwatate	303	436.3		

Table C3.5 (3/9) Present abstraction rate and utilization ratio

B/N no.	District	Location	Initial yield (l/min)	yield (m3/day)	Observed (m3/day)	Utilization ratio
C4219	35	Mwatate	453	652.3		
C4602	35	Mwatate				
C4649	35	Salt Lick				
C4651	35	Mwatate				
C4654	35	Mbololo				
C6630	35	Chawla				
C6631	35	Chawla				
C6633	35	Chawla				
C7182B	35	Kasigau				
Aruba	35	Tsavo East P				
Eldoro	35	Eldoro			43.0	
Mkanj	35	Mkanjoni				
Ndara	35	Ndara				
P0032	35	Vol Roadway Station				
P0154	35	Taveta				
Rlata	35	Taveta				
C6768	36	Madogo			96.0	
Gorfi	36	Gorflsa				
Sawal	36	Sawale				
Titilla 1	36	Titilla 1			1.8	
Titilla 2	36	Titilla 2				
Wema	36	Wema 2				
C4606	41	Kyani				
C5336	41	Rianjeu				
C8079	41	Gwakariguu			4.5	
C9450	41	Slakago Catholic Miss				
Igum.	41	Igumory				
C2324	42	Kulamawe	91	131.0	48.0	0.37
C3665	42	Garba Tula	186	267.8	112.0	0.42
C4402	42	Merti	36	51.8	83.0	1.60
C4423	42	Garba Tula	118	169.9	15.0	0.09
C4543	42	Merti	43	61.9	10.0	0.16
C6656	42	Kinna	100	144.0	2.9	0.02
C6951	42	Sulesa				
C7329	42	Sericho			96.0	
C7631	42	Isiolo Township	136	195.8	250.0	1.28
C7712	42	Sericho			7.2	
C7734	42	Central				
C8976	42	Ngare Mara				
C9380	42	Merti				
Is.As	42	Isiolo				
C0135	43	Mutonguni				
C0538	43	Mutha				
C0696	43	Kanziku				
C0919	43	Ngomeni				
C1452	43	Kangondi				
C1452	43	Mui				
C1508	43	Yatta				
C1595	43	Yatta	182	262.1	8.0	0.03
C3198	43	Mutomo	98	141.1	162.0	1.15
C3712	43	Mwingi				
C3760	43	Yatta				
C3795	43	Ithokwe	76	109.4	616.0	5.63
C3883	43	Ikanga				
C4136	43	Changwlihya	342	492.5	488.0	0.99
C4729	43	Ikanga	209	301.0	45.0	0.15
C4887	43	Migwani				
C4930	43	Migwani				
C4936	43	Migwani				
C5243	43	Mutomo				
C5527	43	Nguni	44	63.4	26.0	0.44
C5673	43	Mutvangomba				
C6628	43	Mutonguni Sec. Sch.	73	108.0	20.9	0.19
Q7313	43	Mutha Mission	97	139.7	30.9	0.22
C7762	43	Matinyani			9.6	
C7764	43	Kafundu				

Table C3.6 (4/9) Present abstraction rate and utilization ratio

B/H no.	District	Location	Initial yield (l/min)	yield (m3/day)	Observed (m3/day)	Utilization ratio
C7950	43	Changwithya				
C8027	43	Matinyani				
C8307	43	Nzambani			29.0	
C9375	43	Mathima				
C9470	43	Changwithya				
C9471	43	Mwingi				
Malik	43	Mulango			158.0	
Ngila	43	Changwithya				
C0078	44	Konza-Machakos				
C0224	44	Konza	61.0	87.8	70.0	0.80
C0461	44	Makueni	273	393.1	210.0	0.53
C0740	44	Athi River	110	158.4	60.0	0.38
C1693	44	Athi River	87	125.3	30.0	0.24
C1769	44	Kyanzavi	19	27.4	9.0	0.33
C2004	44	Klu	75	108.0	40.0	0.37
C2232	44	Mbitlne	121	174.2	58.0	0.33
C2976	44	Konza	36	51.8	13.0	0.25
C3121	44	Mtito Andei	19	27.4	27.0	0.99
C3977	44	Kalhozweni				
C4742	44	Mulhetheni	164	236.2	35.0	0.15
C4885	44	Masii	218	313.9	65.0	0.21
C4973	44	Kithimani	97	139.7	47.0	0.34
C5043	44	Katangl	23	33.1	30.0	0.91
C5054	44	Msongolani				
C5272	44	Madakos Township	38	54.7	15.0	0.27
C6328	44	Athi River				
C6349	44	Koma Rock				
C6536	44	Sengani				
C6588	44	Nzani				
C8028	44	Kilhyoko				
Kambo	44	Mtito Andei				
C1758	45	Logologo	134	193.0	64.0	0.33
C3039	45	Jaldessa				
C3133	45	Gurgabo				
C3602	45	Laisamis				
C3681	45	Logologo				
C3723	45	Bubisa				
C3819	45	Gudas	135	194.4	64.0	0.33
C3890	45	Uran	76	109.4	68.0	0.62
C3896	45	Walda	455	655.2	273.0	0.42
C3966	45	Galole	167	240.5	70.0	0.29
C3983	45	Godoma				
C3984	45	Godoma				
C4084	45	Korr	240	345.6	24.0	0.07
C4181	45	Bori	75	108.0	22.0	0.20
C4825	45	Katacha				
C5001	45	Sabarei				
C5047	45	Ileret				
C5901	45	Godoma			29.0	
C6063	45	Sololo				
C6357	45	Dukana				
C7201	45	Godoma			10.0	
C7202	45	Godoma			300.0	
C7207	45	Sololo			8.0	
C7618	45	Sololo			11.0	
C4233	46	Kariokomo			5.4	
C4272	46	Marima			21.8	
C4348	46	Kinyakina			3.6	
C5543	46	Mufunyi				
C6967	46	Maua			5.0	
C7136	46	Marimantli			10.8	
C7142	46	Nkondi Pr. School			160.0	
C7750	46	Ndoteni				
C9085	46	Meru Show Ground				
C9436	46	Marimantli			4.5	
C9512	46	Chfakariga				



**Table C3.5 (5/9) Present abstraction rate and utilization ratio**

B/H no.	District	Location	Initial yield (l/min)	yield (m <sup>3</sup> /day)	Observed (m <sup>3</sup> /day)	Utilization ratio
C2485	51	Daadab	76	109.4	76.5	0.70
C3085	51	Wetmarar				
C3240	51	Danken				
C3635	51	Madogashi				
C3667	51	Libol	169	243.4	38.0	0.16
C3684	51	Kulan	159	229.0	229.0	1.00
C3695	51	Ifo	150	216.0	25.5	0.12
C3697	51	Gorale				
C3751	51	Shanlabak				
C3753	51	Blla				
C3781	51	Gurufa				
C3831	51	Allinjugul	72	103.7	72.0	0.69
C3852	51	Hagadera				
C3877	51	Kumahumato			200.0	
C3902	51	Libol				
C4313	51	Yumbis				
C4341	51	Rhowa				
C4342	51	Sedell Goshe				
C4447	51	Mbanani				
C4453	51	Damajale			270.0	
C6330	51	Garissa				
C6763	51	Garissa				
C2570	52	Mandera Town				
C3297	52	Mandera Town				
C3567	52	Babasill				
C3568	52	BH 11				
C3696	52	Asahaba				
C3861	52	Wargadud				
C3865	52	Golobla				
C4388	52	Wargadud	83	119.5	54.0	0.45
C4389	52	Danissa				
C4394	52	Walderi				
C4730B	52	Et Kotulo				
C6084	52	Eiwak				
C7184	52	Shimbir Fatuma				
C8094	52	Fincharo				
C8769	52	Kotulo				
C3218	53	Adamasajida				
C3515	53	Gurar				
C3539	53	Tarba]				
C3541	53	Eldas	49	70.6	23.0	0.33
C3658	53	Bute	21	30.2		
C3685	53	Dilmanyale			68.0	
C3715	53	Meri				
C3726	53	Khot Khot				
C3727	53	Abakorey			22.0	
C3736	53	Giriftu				
C3769	53	Hara Khot Khot				
C3788	53	Meri				
C3792	53	Kalalut				
C3820A	53	Sebule	135	194.4	38.0	0.20
C3891	53	Bute				
C3899	53	Dambas	152	218.9	180.0	0.82
C4124	53	Wajir Township				
C4176	53	Arbajahan			50.0	
C4234	53	Daryole				
C4257	53	Shimbirbut				
C4261	53	Sellif	120	172.8	21.0	0.12
C4524	53	Biyamadhaw	20	28.8	14.0	0.49
C4730	53	Kotulo	70	100.8	84.0	0.83
C4872	53	Huthiwal	128	184.3	23.0	0.12
C5267	53	Wajir Bor	21	30.2	25.0	0.83
C5795	53	Habaswein	140	201.6	50.0	0.25
C5796	53	Khorof Harar	100	144.0	120.0	0.83
C6712	53	Wajir Town				
C6902	53	Lefale				

Table C3.5 (6/9) Present abstraction rate and utilization ratio

B/H no.	District	Location	Initial yield (l/min)	yield (m3/day)	Observed (m3/day)	Utilization ratio
C6903	53	Sabunley				
C8692	53	Adams Hadija				
C8693	53	Adams Hadija				
No 1	53	Wajir Town				
C4490	61	Nyaribari				
C5011	61	Ogembo				
C7845	61	Gesima				
C8038	61	Kitutu Chach	8	11.5	9.6	0.83
C8091	61	Nyamira	8	11.5	5.3	
C8123	61	Nyaribari				
C8049	62	N. Nyakach	24	34.6	7.2	0.21
C8055	62	Muhoroni	200	288.0		
C8057	62	W. Kabolto	12	17.3	26.4	1.53
C8117B	62	Awasi	200	288.0	3.6	0.01
C8118	62	East Kolwa	240	345.6	10.8	0.03
C8121	62	N. Kano	300	432.0	5.4	0.01
C3379	63	W. Alego				
C5456	63	N. Ugenya			5.8	
C5708	63	E. Ugenya			10.9	
C5741	63	Sigomora			13.0	
Masa.	63	Centra Uyoma			7.2	
C3395	64	W.Karachwony				
C6215	64	Angenga			11.3	
C6008	64	South Sakwa	50	72.0	10.8	0.15
C6029	64	S. Kabwoch			13.2	
C6263	64	Kanyamwa			12.2	
C6876	64	Magunga	300	432.0	3.6	0.01
C6942	64	Rusinga Isl.			11.0	
C6943	64	Rusinga				
C6950	64	Gem East			9.6	
C7152	64	Kanyanda			14.4	
C7778	64	N.Karachwony	80	115.2	8.6	
C8970	64	C. Suna				
Rakw.	64	W.Kamagambo			12.0	
C3437	71	Tengulbel	151	217.4	36.3	0.17
C3868	71	Nginyang	164	236.2	40.5	0.17
C4722	71	Kabarnet	286	411.8	370.0	0.90
C4777	71	Kisanana	197	283.7	42.0	0.15
C5072	71	Chemeron			21.0	
C5170	71	Kiboino				
C5883	71	Mogotlo				
C6362	71	Salabani				
C6363	71	Kosilei				
C6364	71	Cheserimton	42	60.5	30.0	0.50
C6365	71	Ngambo				
C6652	71	Loboi			24.0	
C6970	71	Kabarnet				
C722B	71	Eldama Ravin				
C7456	71	Kabluk			50.4	
P0094	71	Oikokwe				
C1074	72	Bukar			72.0	
C1127	72	Kibtoro			3.6	
C5112	72	Chebloch				
C5159	72	Chepsirei				
C5346	72	Tot				
C6323	72	iten town			100.0	
C0607	73	Konza			2.4	
C1183	73	Kinyewa	60	86.4	9.9	0.11
C1231	73	Endonet				
C1391	73	Elangataus				
C1534	73	Matapato				
C1539	73	Dalalakotok				
C2500	73	Ngong				
C2647	73	Matapato				
C2976	73	Sultan Hamud	152	218.9	10.0	0.05
C3392	73	Bisset				

Table C3.5 (7/9) Present abstraction rate and utilization ratio

B/H no.	District	Location	Initial yield (l/min)	yield (m <sup>3</sup> /day)	Observed (m <sup>3</sup> /day)	Utilization ratio
C3436	73	Lodokilani				
C3481	73	Kaputei	227	326.9	14.0	0.04
C3519	73	Imaroro				
C3649	73	Odomogi				
C3746	73	Engorika				
C3836	73	Lolokitok				
C4182	73	Elangataus				
C4199	73	Kiserian	545	784.8	198.0	0.25
C4258	73	Emariti	155	223.2	24.0	0.11
C4498	73	Oloylangalani				
C4532	73	Tursai				
C4612	73	Mashuru				
C4641	73	Olxloriti				
C4934	73	Lorngoswa				
C6269	73	Ongatarongal	215	309.6	20.0	0.06
C6739	73	Isenya	150	216.0	72.0	0.33
C7447	73	Namanga				
Oolny	73	Malapato				
Ijili	73	Odomogi			19.8	
P0016	73	Kekonyoke			9.0	
P0059	73	Kinyawa			36.0	
C1134	74	Chepsir				
C3341	74	Sotik				
C4655	74	Kimulot				
C4868	74	Soin				
C0037	75	Alyam				
C0150	75	Oldonyo Farm				
C0372	75	Twala			4.0	
C0523	75	Niurkana				
C0884	75	Muhonia				
C1646	75	Tinga Mara	288	414.7	96.0	0.23
C1767	75	Mulera	167	240.5	42.0	0.17
C1785	75	Luonlek				
C1813	75	Dol Dol	55	79.2	24.0	0.30
C1977	75	Tandara				
C2349	75	Ngobil				
C2561	75	Oi Pajeja	151	217.4	19.2	0.09
C3420	75	Mukogodo	72	103.7	26.8	0.28
C3670	75	Narumoru	11	15.8	2.4	0.15
C4180	75	Ngumo				
C5019	75	Nanyuki				
C5069	75	Kinamba			12.3	
C5139	75	Anandaguru				
C5140	75	Aljijo				
C5197	75	Oi Kinyal				
C6366	75	Sweet Waters				
Oldon	75	Oldonyo Farm				
BHNo1	76	Naivasha			700.0	
C0422	76	moto Town				
C0736	76	Kabazi				
C2704	76	Elmenteta	155	223.2	14.4	0.06
C5819	76	Mbaruk				
C6056	76	mau Narok				
C7381	76	Lomolo				
C7729	76	Nakuru town			2.0	
C8297	76	Njoro			249.0	
NdibF	76	Dabibi				
Barat	77	Chemundu				
C6306	77	Mosoroti	158	227.5	24.0	0.11
C6331	77	Chemundu	45	64.8	59.0	0.91
C3525	78	Masiro				
C4695	78	Talex				
C4831	78	Mulot				
C6017	78	Otololunga				
C6082	78	Kilgoris			3.6	
C6806	78	Nalkara			1.02	

**Table C3.5 (8/9) Present abstraction rate and utilization ratio**

B/H no.	District	Location	Initial yield (l/min)	yield (m <sup>3</sup> /day)	Observed (m <sup>3</sup> /day)	Utilization ratio
C8315	78	Siria North				
C1639	79	Marti				
C1776	79	Barsalinga				
C2750	79	Kirimun				
C3505	79	Lerata				
C3566	79	Lerata				
C3599	79	Sorolepi	364	524.2	10.1	0.02
C3651	79	Lesirkan				
C3808	79	Wamba Hosp.			0.6	
C3832	79	Londungokwe	68	97.9	30.0	0.31
C3833	79	Sirata Oirobi	44	63.4	9.6	0.15
C3855	79	Baragol				
C3869	79	Baragol				
C4315	79	Wamba	80	115.2	37.0	0.32
C4316	79	Bawa				
C4417	79	Baragol				
C4513	79	Wamba Town				
C7190	79	Sorelepi				
C7191	79	Lodo Kejek			6.0	
C7908	79	Lodero			9.0	
C7911	79	Wamba				
C7914	79	Lengusaka				
C7915	79	Lengel				
C7917	79	Kawop			29.0	
C7918	79	Basarloi				
C7919	79	Masekita				
C7921	79	Losuk				
C7922	79	Maralai				
C8989	79	Kirimunu	33	47.5	15.0	0.32
C9068	79	Maralai				
C9119	79	Opiroi				
Lorok	79	Nalbo Keju			16.2	
Wamba	79	Wamba			0.9	
C7312	81	Kiminini			2.0	
C7827	81	Kiminini				
C8140	81	Chepsiro				
C8509	81	Gidea				
C8826	81	Chepchoina				
C9299	81	Silatunga				
C3789	82	Loklchar	76	109.4	68.0	0.62
C5076	82	Kalobeyel				
C5079	82	Naweton				
C5080	82	Natira				
C5082	82	Kangakiporo				
C5088	82	Ngisiger				
C5100	82	Loklchoglo				
C5621	82	Nakwuzo				
C5625	82	Yapakuno				
C5636	82	Kwatela				
C5644	82	Kaikor				
C5653	82	Ngisiger				
C5773	82	Kawalathe				
C5840	82	Kanamkemer				
C5843	82	Loperot				
C5859	82	Lolongot				
C5861	82	Kalemonyorok				
C5867	82	Lorengipi				
C5872	82	Lokori	200	288.0	36.0	0.13
C6087	82	Kalokoi				
C6521	82	Lopur				
C6538	82	Lorgum				
C6540	82	Lorgum				
C6541	82	Lorgum				
C6548	82	Lomelo				
C6553	82	Napeliom				
C6554	82	Lokwamosing				

Table C3.5 (9/9) Present abstraction rate and utilization ratio

B/H no.	District	Locallon	Initial yield (l/min)	yield (m3/day)	Observed (m3/day)	Utilization ratio
C6563	82	Kerlo				
C6564	82	Kerlo				
C6568	82	Lorengipi				
C6568	82	Kinabur				
C6569	82	Lorengipi				
C6570	82	Lokore				
C6583	82	Kibish				
C6585	82	Kwateia				
C7634	82	Ngistgar				
C7637	82	Kwateia				
C7654	82	Lokitaung				
C7659	82	Aterika				
C7663	82	Nariokotome				
C7668	82	Monti				
C7674	82	Lopur				
C7678	82	Kakuma				
C7810	82	Lokichogio				
C8443	82	Lodwar				
TW274	82	Yapakuno				
C0617	83	Sergoit Ranch Farm				
C2689	83	Kabitm	27	38.88	6.0	0.15
C2762	83	Matunda	121	174.2	27.5	0.16
C3153	83	Lalguse				
C3712	83	Sergoit Ranch Farm				
C4333	83	Soy				
C6098	83	Lessos	67	96.48	59.0	0.61
C7763	83	Sergoit			12.0	
C9415	83	E Anabkoi				
Ngeri	83	Ngeria				
C4557	84	Marich Pass			54.0	
C5414	84	Morobus			5.8	
C5430	84	Chesera			3.6	
C5431	84	Serewa				
D0914	84	Nakillimer				
D1503	84	Kunyao			6.0	
C5284	91	S. Namwera			10.2	
C5288	91	Cheptais				
C7506	91	E. Bukusu			8.0	
C7999	91	Naitiri				
C8389	91	Bokoli				
C8771	91	Bumula				
C5123	92	S. Teso				
C5189	92	W. Bukhaya			17.8	
C5944	92	East Bukhaya			12.6	
C5975	92	Samia South				
C6129	92	N. Teso			7.2	
C7891	92	Samia North			12.6	
C5246	93	Municipality				
C7024	93	E. Wanga				
C7068	93	C. Kabras				
C7559	93	N. Wanga			13.0	
C8534	93	C. Marama				
C8556	93	Lumakanda	67	96.5	16.0	0.17
Count			139	139	174	131
Ave			144.6	208.2	77.0	0.48
Min			2.0	2.9	0.9	0.01
Max			800.0	1152.0	744.0	7.25
St. dev.			129.93	187.10	122.29	0.826

Table C3.6 (1/5) Estimated groundwater abstraction rates

Basin code	Agricultural (m3/day)	Domestic (m3/day)	Exploratory (m3/day)	Irrigation (m3/day)	Livestock (m3/day)	Observation (m3/day)	Other (m3/day)	Public w/s (m3/day)	Unknown (m3/day)	Total (m3/day)
1AA	0.0	0.0	0	0.0	0.0	0.0	0.0	107.9	27.0	134.9
1AB	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	77.8	77.8
1AC	0.0	0.0	0	0.0	0.0	0.0	0.0	816.1	136.0	952.1
1AD	0.0	0.0	0	0.0	0.0	0.0	0.0	41.0	41.0	82.0
1AE	0.0	0.0	0	0.0	0.0	0.0	0.0	269.2	38.5	307.7
1AF	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1AG	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1AH	0.0	0.0	0	0.0	0.0	0.0	0.0	882.0	348.7	1230.7
1BA	25.8	0.0	0	51.6	0.0	0.0	0.0	51.6	206.3	335.2
1BB	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	264.0	264.0
1BC	38.1	38.1	0	0.0	0.0	0.0	0.0	0.0	152.3	228.4
1BD	24.2	0.0	0	24.2	0.0	0.0	48.4	24.2	96.9	218.0
1BE	29.5	44.3	0	29.5	0.0	0.0	14.8	0.0	59.1	177.2
1BG	42.4	0.0	0	0.0	0.0	0.0	21.2	0.0	63.6	127.3
1BH	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1CA	45.0	0.0	0	22.5	0.0	0.0	45.0	22.5	404.9	539.9
1CB	138.7	0.0	0	0.0	27.7	0.0	27.7	27.7	277.4	499.4
1CC	35.7	0.0	0	0.0	0.0	0.0	0.0	17.9	142.9	196.5
1CD	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	226.3	226.3
1CE	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	92.4	92.4
1DA	0.0	0.0	0	19.1	0.0	0.0	19.1	325.5	153.2	517.0
1DB	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	244.3	244.3
1DC	0.0	0.0	0	0.0	0.0	0.0	0.0	27.9	44.7	72.6
1DD	49.4	0.0	0	0.0	0.0	0.0	0.0	716.1	148.1	913.6
1EA	0.0	0.0	0	0.0	0.0	0.0	0.0	224.2	124.6	348.8
1EB	0.0	35.3	0	0.0	0.0	0.0	0.0	424.1	565.5	1025.0
1EC	0.0	0.0	0	0.0	0.0	0.0	21.1	400.1	252.7	673.9
1ED	20.6	0.0	0	0.0	0.0	0.0	0.0	205.6	370.0	596.2
1EE	0.0	0.0	0	0.0	0.0	0.0	0.0	276.1	717.9	994.0
1EF	0.0	0.0	0	0.0	0.0	0.0	76.4	687.7	38.2	802.3
1EG	0.0	0.0	0	0.0	0.0	0.0	56.3	562.8	112.6	731.6
1FA	0.0	0.0	0	0.0	0.0	0.0	74.6	74.6	0.0	149.3
1FB	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1FC	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	106.6	106.6
1FD	84.9	0.0	0	0.0	0.0	0.0	0.0	0.0	84.9	84.9
1FE	0.0	0.0	0	0.0	0.0	0.0	67.6	67.6	67.6	202.8
1FF	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1FG	0.0	0.0	0	0.0	0.0	0.0	42.6	42.6	0.0	85.2
1GA	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1GB	230.1	0.0	0	76.7	0.0	0.0	230.1	0.0	76.7	613.7

Table C3.6 (2/5) Estimated groundwater abstraction rates

Basin code	Agricultural (m3/day)	Domestic (m3/day)	Exploratory (m3/day)	Irrigation (m3/day)	Livestock (m3/day)	Observation (m3/day)	Other (m3/day)	Public w/s (m3/day)	Unknown (m3/day)	Total (m3/day)
1GC	207.4	0.0	0	0.0	0.0	0.0	207.4	0.0	345.6	760.4
1GD	324.4	108.1	0	0.0	0.0	0.0	540.7	162.2	162.2	1297.7
1GE	0.0	91.6	0	0.0	0.0	0.0	274.7	122.1	122.1	610.5
1GF	0.0	0.0	0	0.0	0.0	0.0	162.7	20.3	0.0	183.0
1GG	54.0	54.0	0	0.0	0.0	0.0	0.0	0.0	54.0	162.0
1HA	1253.1	0.0	0	167.1	0.0	0.0	1169.5	0.0	417.7	3007.4
1HB	0.0	0.0	0	0.0	0.0	0.0	39.4	0.0	39.4	78.8
1HC	0.0	135.5	0	0.0	0.0	0.0	45.2	45.2	0.0	225.8
1HD	0.0	280.7	0	0.0	0.0	0.0	28.1	84.2	0.0	393.0
1HE	0.0	214.0	0	0.0	0.0	0.0	53.5	0.0	0.0	267.5
1HF	0.0	730.8	0	0.0	0.0	0.0	203.0	162.4	0.0	1096.2
1HG	0.0	81.6	0	0.0	0.0	0.0	81.6	0.0	0.0	163.3
1JA	208.9	208.9	0	0.0	0.0	0.0	0.0	0.0	278.5	696.3
1JB	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1JC	124.4	0.0	0	0.0	0.0	0.0	62.2	0.0	62.2	248.8
1JD	0.0	0.0	0	0.0	0.0	0.0	101.7	0.0	0.0	101.7
1JE	0.0	131.2	0	0.0	0.0	0.0	0.0	0.0	0.0	131.2
1JF	32.9	0.0	0	32.9	0.0	0.0	0.0	98.6	65.7	230.1
1JG	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	89.8	89.8
1KA	57.9	57.9	0	0.0	0.0	0.0	57.9	115.7	57.9	347.2
1KB	0.0	0.0	0	0.0	0.0	0.0	151.6	50.5	50.5	252.6
1KC	0.0	25.5	0	0.0	0.0	0.0	50.9	127.4	0.0	203.8
1LA	126.2	0.0	0	42.1	0.0	0.0	84.1	84.1	0.0	336.5
1LB	202.1	161.7	0	0.0	40.4	0.0	80.8	40.4	323.3	848.8
2AA	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2AB	0.0	0.0	0	0.0	0.0	0.0	0.0	402.0	0.0	402.0
2BA	0.0	0.0	0	0.0	40.9	0.0	0.0	122.7	163.6	327.1
2BB	0.0	0.0	0	0.0	191.6	0.0	0.0	82.1	0.0	273.7
2BC	0.0	116.6	0	0.0	116.6	0.0	16.7	816.5	100.0	1166.4
2BO	0.0	480.0	0	0.0	36.9	0.0	0.0	886.2	73.8	1476.9
2CA	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	201.6	201.6
2CB	0.0	0.0	0	78.4	0.0	0.0	78.4	78.4	78.4	313.6
2CC	0.0	0.0	0	0.0	0.0	0.0	30.8	276.9	61.5	369.2
2D	0.0	0.0	0	0.0	0.0	0.0	0.0	572.6	0.0	572.6
2EA	599.2	59.9	0	0.0	0.0	0.0	119.8	299.6	659.1	1737.6
2EB	371.6	0.0	0	0.0	0.0	0.0	92.9	0.0	0.0	464.4
2EC	680.2	0.0	0	42.5	0.0	0.0	127.5	170.0	850.2	1870.5
2ED	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	180.8	180.8
2EE	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2EF	0.0	0.0	0	0.0	0.0	0.0	0.0	117.1	117.1	234.2

Table C3.6 (3/5) Estimated groundwater abstraction rates

Basin code	Agricultural (m3/day)	Domestic (m3/day)	Exploratory (m3/day)	Irrigation (m3/day)	Livestock (m3/day)	Observation (m3/day)	Other (m3/day)	Public w/s (m3/day)	Unknown (m3/day)	Total (m3/day)
2EG	499.0	0.0	41.6	83.2	0.0	0.0	457.4	124.8	1081.2	2287.2
2EM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2EJ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	112.3	112.3	224.5
2EK	58.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	234.6	293.2
2FA	506.1	56.2	0.0	0.0	56.2	0.0	166.7	56.2	224.9	1066.3
2FB	73.6	0.0	0.0	73.6	0.0	0.0	220.9	0.0	306.2	736.4
2FC	1413.0	97.4	0.0	292.3	146.2	0.0	730.8	438.5	1754.0	4872.2
2GA	0.0	0.0	0.0	0.0	110.8	0.0	166.1	0.0	498.4	775.3
2GB	459.1	57.4	57.4	114.8	0.0	0.0	172.2	229.5	1090.3	2180.6
2GC	124.6	62.3	0.0	0.0	0.0	0.0	0.0	0.0	124.6	311.4
2GD	1899.0	263.7	0.0	105.5	52.7	52.7	527.5	105.5	2743.0	5749.7
2H	341.2	255.9	42.7	85.3	128.0	0.0	170.6	298.6	810.4	2132.6
2J	0.0	26.7	0.0	0.0	0.0	0.0	0.0	935.1	26.7	961.8
2K	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2KA	147.5	0.0	0.0	0.0	0.0	0.0	49.2	0.0	196.7	393.3
2KB	128.6	0.0	0.0	0.0	0.0	0.0	0.0	64.3	192.9	385.8
2KC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3AA	1672.8	897.6	0.0	482.6	122.4	0.0	1387.2	693.6	4691.9	9954.9
3AB	362.5	0.0	0.0	31.9	63.7	0.0	63.7	127.5	924.4	1593.7
3AC	344.5	98.4	0.0	49.2	0.0	0.0	492.2	147.7	865.9	2017.9
3BA	4435.4	0.0	82.1	1067.8	82.1	0.0	3244.4	1314.2	9404.7	19630.7
3BB	2184.7	115.0	0.0	345.0	57.5	0.0	747.4	977.4	3679.6	8106.5
3BC	1087.1	483.2	0.0	181.2	0.0	0.0	483.2	60.4	422.8	2717.7
3BD	572.2	0.0	0.0	286.1	0.0	57.2	114.4	171.7	743.8	1945.4
3CA	1061.0	1185.8	0.0	748.9	62.4	0.0	374.5	624.1	436.9	4493.4
3CB	776.6	0.0	0.0	0.0	59.7	0.0	477.9	59.7	597.4	1971.4
3DA	173.5	0.0	0.0	0.0	0.0	0.0	86.7	86.7	303.6	650.5
3DB	97.2	0.0	0.0	0.0	0.0	0.0	97.2	0.0	97.2	291.7
3EA	419.3	125.8	0.0	41.9	0.0	0.0	209.6	377.4	838.6	2012.5
3EB	0.0	0.0	0.0	0.0	0.0	0.0	88.0	132.0	220.1	440.1
3EC	116.3	0.0	0.0	0.0	0.0	0.0	58.2	290.8	116.3	581.6
3ED	0.0	0.0	0.0	0.0	0.0	0.0	62.1	186.4	124.2	372.7
3FA	333.3	999.8	0.0	0.0	333.3	0.0	999.8	333.3	0.0	2999.3
3FB	2734.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2734.7
3G	0.0	0.0	0.0	0.0	0.0	0.0	410.1	58.6	0.0	468.6
3HA	0.0	0.0	0.0	0.0	107.9	0.0	0.0	107.9	107.9	323.6
3HB	0.0	0.0	0.0	0.0	107.9	0.0	0.0	107.9	107.9	323.6
3HC	86.2	86.2	0.0	0.0	86.2	0.0	86.2	86.2	0.0	431.1
3HD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	323.6	0.0	323.6



Table C3.6 (4/5) Estimated groundwater abstraction rates

Basin code	Agricultural (m3/day)	Domestic (m3/day)	Exploratory (m3/day)	Irrigation (m3/day)	Livestock (m3/day)	Observation (m3/day)	Other (m3/day)	Public w/s (m3/day)	Unknown (m3/day)	Total (m3/day)
3J	0.0	0.0	0.0	0.0	0.0	0.0	0.0	140.0	559.9	699.8
3K	76.3	0.0	0.0	25.4	0.0	0.0	0.0	1678.4	152.6	1932.7
3L	99.1	49.6	0.0	0.0	24.8	0.0	223.0	1412.3	396.4	2208.2
3M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3MA	175.0	0.0	0.0	58.3	58.3	58.3	175.0	408.3	408.3	1341.4
3MB	191.4	0.0	0.0	63.8	0.0	63.8	191.4	382.8	446.6	1339.8
3MC	191.4	0.0	0.0	63.8	0.0	0.0	191.4	382.8	510.4	1339.8
3MD	128.8	322.0	0.0	64.4	64.4	0.0	193.2	386.4	515.2	1674.4
3N	197.9	0.0	0.0	0.0	0.0	0.0	346.3	247.4	247.4	1137.9
4AA	127.8	127.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	255.6
4AB	234.9	0.0	0.0	93.9	0.0	0.0	93.9	0.0	140.9	563.6
4AC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4AD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.7	201.4	302.0
4BA	159.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	79.7	239.1
4BB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4BC	0.0	162.9	0.0	0.0	0.0	0.0	0.0	0.0	81.4	244.3
4BD	127.3	169.8	0.0	0.0	0.0	0.0	0.0	0.0	42.4	339.5
4BE	0.0	0.0	0.0	0.0	0.0	0.0	81.0	162.0	162.0	404.9
4BF	69.7	0.0	0.0	0.0	0.0	0.0	104.5	104.5	348.4	627.1
4BG	0.0	0.0	45.1	45.1	45.1	0.0	135.2	45.1	225.4	540.8
4CA	314.7	0.0	0.0	0.0	0.0	0.0	157.4	0.0	681.9	1154.0
4CB	284.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	142.1	426.2
4CC	684.3	45.6	0.0	136.9	0.0	0.0	547.5	136.9	547.5	2098.6
4DA	153.9	153.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	307.8
4DB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4DC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4DD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4DE	64.6	129.2	0.0	0.0	0.0	0.0	64.6	0.0	64.6	323.0
4EA	0.0	0.0	0.0	0.0	0.0	0.0	173.7	0.0	0.0	173.7
4EB	0.0	0.0	0.0	0.0	0.0	0.0	221.6	55.4	0.0	277.0
4EC	82.8	0.0	0.0	82.8	0.0	0.0	82.8	0.0	82.8	331.1
4ED	0.0	0.0	0.0	0.0	0.0	0.0	119.8	0.0	179.7	299.4
4FA	0.0	0.0	0.0	0.0	0.0	0.0	175.7	0.0	0.0	175.7
4FB	38.3	0.0	0.0	0.0	30.3	0.0	0.0	574.4	38.3	689.2
4GA	0.0	0.0	0.0	0.0	29.5	0.0	29.5	206.5	59.0	324.5
4GB	0.0	0.0	0.0	0.0	38.1	0.0	38.1	76.2	38.1	190.4
4GC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	190.4	0.0	190.4
4GD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4GE	0.0	229.0	0.0	0.0	0.0	0.0	0.0	343.5	0.0	572.5
4GF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4GG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table C3.6 (5/5) Estimated groundwater abstraction rates

Basin code	Agricultural (m3/day)	Domestic (m3/day)	Exploratory (m3/day)	Irrigation (m3/day)	Livestock (m3/day)	Observation (m3/day)	Other (m3/day)	Public w/s (m3/day)	Unknown (m3/day)	Total (m3/day)
4KA	0.0	0.0	0.0	0.0	45.4	0.0	45.4	227.1	90.9	408.8
4HB	0.0	0.0	0.0	0.0	40.9	0.0	81.8	204.4	81.8	408.8
4JA	0.0	0.0	0.0	105.3	0.0	0.0	0.0	52.6	105.3	263.2
4JB	0.0	0.0	0.0	105.3	0.0	0.0	0.0	52.6	105.3	263.2
4KA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4KB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	485.4	242.7	728.1
5AA	167.3	0.0	0.0	0.0	0.0	0.0	55.8	27.9	529.8	780.7
5AB	68.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	238.3	306.3
5AC	259.9	0.0	0.0	0.0	37.1	0.0	148.5	0.0	222.8	668.3
5AD	111.5	0.0	0.0	0.0	55.8	0.0	55.8	0.0	0.0	223.0
5BA	114.2	0.0	0.0	0.0	0.0	0.0	57.1	0.0	171.3	342.5
5BB	47.1	0.0	0.0	0.0	0.0	0.0	47.1	0.0	188.2	282.3
5BC	158.3	0.0	0.0	22.6	0.0	0.0	45.2	22.6	384.5	633.3
5BD	246.0	0.0	0.0	0.0	0.0	0.0	82.0	0.0	287.0	614.9
5BE	46.8	0.0	0.0	0.0	0.0	0.0	46.8	0.0	327.9	421.5
5CA	86.5	0.0	0.0	28.8	57.7	0.0	28.8	115.3	115.3	432.4
5CB	35.7	0.0	0.0	0.0	0.0	0.0	35.7	142.8	142.8	356.9
5CC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5DA	181.5	18.2	0.0	0.0	18.2	0.0	54.5	127.1	308.6	707.9
5DB	134.0	0.0	0.0	0.0	26.8	0.0	53.6	107.2	267.9	589.4
5DC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5DD	0.0	213.4	0.0	213.4	0.0	0.0	213.4	0.0	0.0	640.3
5EA	0.0	0.0	0.0	0.0	41.6	0.0	41.6	145.6	83.2	312.0
5EB	0.0	0.0	0.0	0.0	30.2	0.0	150.9	271.6	120.7	573.4
5EC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	125.2	0.0	125.2
5FA	0.0	0.0	0.0	0.0	130.7	0.0	32.7	555.3	32.7	751.3
5FB	0.0	0.0	0.0	0.0	128.0	0.0	42.7	469.3	42.7	682.6
5G	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5J	0.0	0.0	0.0	0.0	0.0	0.0	202.5	354.3	0.0	556.7
(m3/day)	32192.9	9488.5	268.8	5692.8	2942.0	232.1	21619.9	30483.7	53836.1	156756.9
(m3/year)	11750415	3463319	98123.5	2077863	1073829	84714	7891275	11128550	19650189	57216279

Table C3.7 (1/17) Drawdown analyses

B/H no.	Longitude	Latitude	District code	Water level struck (m)	Rest (m)	Yield (m <sup>3</sup> /hr)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient	Calculated drawdown after 1 day (m)	Calculated drawdown after 1 year (m)	Calculated drawdown after 20 years (m)
8059	35.0167	-0.3000	62	32	8	1.08	1.05E-01	1.12E-01	0.17	0.25	0.29
6663	36.0333	2.4833	82	26	2	0.78	4.07E-02	5.59E-02	0.31	0.46	0.54
4130	37.6667	-3.4000	33	61	31	23.82	9.81E-01		0.34	0.53	0.63
6624	36.7833	-1.3330	73	128	88	13.2	5.03E-01		0.39	0.60	0.70
5664	34.7500	0.4333	93	27	11	1.92	7.12E-02	1.41E-01	0.43	0.64	0.75
4511			76	96	27	12	3.66E-01	6.24E-01	0.52	0.77	0.90
4484			73	124	62	0.48	1.38E-02	6.57E-02	0.60	0.77	0.91
6638	35.4333	2.9667	82	40	13	3	7.84E-02	5.48E-01	0.65	0.84	1.00
8060	35.0000	-0.3000	62	56	28	0.72	1.83E-02	2.53E-02	0.65	0.95	1.11
4537	36.6333	-1.1000	21	83	77	30	6.10E-01	2.76E-01	0.68	1.26	1.46
5872	35.1000	1.9500	82	23	30	12	2.09E-01	9.41E-02	1.03	1.48	1.70
4201	36.6833	-1.3830	73	104	16	32.7	4.99E-01		0.96	1.48	1.74
8068	34.9167	-0.0830	62	50	6	1.08	1.65E-02	5.74E-02	0.99	1.61	1.77
4846			11	138	66	7.2	1.10E-01	2.97E-01	1.02	1.53	1.79
6206	35.9333	-0.3670	76	158	34	16.62	2.42E-01		0.99	1.53	1.80
6004	36.6333	-1.1830	21	150	110	6.52	7.82E-02		1.22	1.77	2.05
4583			46	60	72	7.56	1.04E-01		1.19	1.76	2.05
3660	35.2000	0.7000	83	61	8	0.42	4.88E-03	2.11E-02	1.28	1.95	2.30
5366	36.9167	-1.4830	73	76	65	2.88	3.05E-02	2.02E-01	1.36	2.08	2.46
7681	34.6600	-0.6170	64	16	6	1.8	1.90E-02	1.33E-01	1.35	2.09	2.47
4801			63	61	130	0.072	7.69E-04	3.98E-03	1.37	2.10	2.48
6757	34.3000	-0.6600	64	45	12	1.9	1.95E-01	4.86E-01	1.44	2.16	2.52
4830			21	70	22	6.72	7.21E-02	1.96E-01	1.45	2.17	2.54
6642			82	39	30	0.72	7.45E-03	3.63E-02	1.42	2.18	2.56
4573			46	60	72	7.56	7.48E-02	5.72E-01	1.43	2.22	2.62
6252	35.0167	1.3833	84	36	30	0.06	5.36E-04	4.33E-03	1.58	2.26	2.90
5931	34.2000	0.4667	92	33	11	1.44	1.32E-02	3.66E-02	1.60	2.56	2.98
5928	34.3000	0.3333	92	28	11	1.82	1.44E-02	5.91E-02	1.68	2.56	3.01
6057			21	92	71	9.9	8.30E-02	4.20E-01	1.75	2.58	3.16
5349			71	10	7	6.54	5.71E-02	1.74E-01	1.82	2.72	3.17
5979	36.0000	-0.2830	76	67	27	2.50E-01	2.50E-01	1.34E-01	1.91	2.75	3.18
7648	36.4500	4.7833	82	3	3	1.2	9.98E-03	3.12E-02	1.84	2.76	3.26
3811	39.1600	2.0000	53	120	112	0.12	9.68E-04	4.08E-03	1.85	2.82	3.31
7381	36.6833	-0.3330	76	168	136	28.8	2.20E-01		1.89	2.91	3.43
4638	40.8667	2.6500	52	36	16	9.6	7.53E-02	1.94E-01	1.99	2.98	3.49
7668	36.6167	3.0000	82	46	46	0.72	5.49E-03	1.30E-02	2.00	3.06	3.60
8061	34.9000	-0.1670	62	53	7	1.08	7.49E-03	6.28E-02	2.02	3.16	3.72
6058	36.8500	-1.2600	11	82	60	12	8.30E-02	4.20E-01	2.12	3.26	3.83
5920	34.2000	0.4333	92	34	5	1.5	1.03E-02	6.10E-02	2.14	3.28	3.86
6240	36.1167	1.1167	64	57	29	2.46	1.66E-02	1.03E-01	2.26	3.49	4.12
6623			64	37	27	0.36	2.16E-03	1.31E-02	2.41	3.71	4.37
6690	34.6670	0.3600	93	37	13	1.62	1.07E-02	2.82E-03	2.85	4.03	4.63
4919	36.8500	-0.2830	76	86	82	8.88	4.88E-02	3.30E-01	2.60	4.02	4.75
5691	34.6300	0.3166	93	33	13	0.84	4.50E-03	1.70E-02	2.81	4.27	5.01
7650	36.4600	4.7833	82	24	0	0	6.03E-02	6.23E-02	2.96	4.36	5.07

Table C3.7 (2/17) Drawdown analyses

B/H no.	Longitude	Latitude	District code	Water level Struck (m)	Rest (m)	Yield (m <sup>3</sup> /hr)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient	Calculated drawdown after 1 day after 1 year (m)	Calculated drawdown after 20 years after 1 year (m)	Calculated drawdown at 500 m from the pumping borehole after 1 year after 20 years (m)
4530			79	56	61	11.82	6.73E-02	5.45E-02	3.00	4.38	0.43
5873	36.1167	2.1167	82	13	72	2.4	1.28E-02	1.84E-02	3.06	4.53	0.34
8449	37.4833	-2.7830	73	37	17	12	6.10E-02	1.97E-01	3.00	4.54	0.89
3909	36.8167	-1.2330	11	140	102	0.48	2.30E-03	1.00E-02	3.07	4.68	0.85
4989	36.4000	-0.8330	76	2	1	40.5	1.92E-01	6.11E-01	3.23	4.88	0.21
5924	34.3000	0.3667	92	35	11	1.02	4.65E-03	2.73E-02	3.18	4.89	0.82
6567	34.9833	2.5667	82	26	11	3.96	1.71E-02	9.67E-02	3.36	5.18	0.87
5221	34.9667	1.2833	84	27	17	1.56	6.60E-03	4.16E-02	3.40	5.25	0.86
6634	36.6667	-1.1330	21	129	23	5.28	2.22E-02	1.14E-01	3.49	5.35	0.93
4773			32	40	14	3	1.22E-02	9.88E-02	3.46	5.38	0.82
7436			82	23	4	18	8.20E-02	2.21E-02	4.08	5.79	1.71
8964	37.4500	0.1667	46	106	92	4.44	1.80E-02	3.10E-02	3.97	5.90	1.31
5501	36.4500	-0.4830	24	66	14	4.5	1.72E-02	8.49E-02	3.85	5.90	1.03
6276	36.2167	-1.2170	21	80	100	6	2.28E-02	1.36E-01	3.84	5.91	0.96
4388			52	159	121	4.98	1.90E-02	7.58E-02	3.93	5.98	1.11
7344	37.7000	0.5033	42	17	14	9.96	3.72E-02	2.11E-01	3.89	5.98	1.01
5853	35.5000	2.0000	82	40	15	0.0796	2.93E-04	2.03E-03	3.88	6.01	0.96
8883			21	75	27	9.3	3.41E-02	2.12E-01	3.93	6.06	1.00
8904	34.2000	3.7333	82	62	47	1.44	5.32E-03	2.72E-02	3.97	6.09	1.06
5234	36.2833	-1.4170	43	8	7	9.96	3.49E-02	1.46E-01	4.26	6.49	1.19
5866	35.3667	2.4833	82	79	45	1.02	3.54E-03	1.78E-02	4.23	6.49	1.13
4178	36.3833	-0.6830	76	25	16	36	1.22E-01	2.75E-01	4.65	6.96	1.47
5935	34.4833	0.4500	93	31	11	1.2	3.88E-03	1.33E-02	4.70	7.12	1.37
7793	35.7000	-0.2830	76	68	6	7.56	2.31E-02	2.13E-01	4.54	7.10	1.03
6575	35.0000	2.8833	82	50	4	0.3	9.25E-04	6.00E-03	4.65	7.19	1.17
3682	37.9167	2.0000	45	104	94	14.46	4.71E-02	9.38E-02	4.89	7.29	1.58
5369	36.7500	-1.3830	73	42	29	10.44	3.37E-02	6.61E-02	4.94	7.36	1.60
8052	34.9667	-0.3000	62	23	25	0.72	2.20E-03	8.90E-03	4.90	7.46	1.38
6753	34.2833	-0.5930	64	16	10	1.62	4.88E-03	2.27E-02	4.91	7.51	1.34
8053	34.8000	-0.2870	62	67	15	0.96	2.88E-03	1.28E-02	4.95	7.56	1.36
6620	34.5167	-0.6830	64	40	17	1.5	4.39E-03	2.17E-02	5.03	7.70	1.35
5206	36.8333	-1.2830	11	188	14	9.48	2.67E-02	1.33E-01	5.22	8.00	1.40
5398			35	59	55	7.32	2.01E-02	1.28E-01	5.23	8.08	1.32
5174	36.8500	-1.3000	11	92	27	6.56	1.83E-02	6.83E-02	5.49	8.34	1.57
4523			82	23	16	5.94	1.59E-02	7.94E-02	5.49	8.41	1.47
4841	36.6667	-1.3330	11	118	94	9	2.37E-02	1.22E-01	5.56	8.54	1.48
4861			21	128	82	11.4	2.94E-02	1.76E-01	5.60	8.64	1.44
6221	34.9667	2.2833	82	27	17	2.52	6.41E-03	4.14E-02	5.64	8.72	1.42
4733			21	40	26	0.96	2.43E-03	1.59E-02	5.66	8.75	1.42
6631			35	28	8	13.2	3.45E-02	6.43E-02	6.12	9.12	2.00
8064	34.8167	-0.1670	62	47	6	0.84	2.05E-03	9.29E-03	6.07	9.28	1.66
4278	36.7667	-1.1670	21	84	76	4.98	1.22E-02	5.12E-02	6.09	9.29	1.70
5676			11	160	12	20.28	4.95E-02	2.14E-01	6.10	9.30	1.69
4888			43	3	60	1.8	4.25E-03	2.73E-02	6.08	9.40	1.53
7109			11	146	15	6.78	1.56E-02	1.05E-01	6.21	9.61	1.55

Table C3.7 (3/17) Drawdown analyses

B/H no.	Longitude	Latitude	District code	Water level Struck (m)	Rest (m)	Yield (m <sup>3</sup> /hr)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient	Calculated drawdown after 1 day (m)	Calculated drawdown after 1 year (m)	Calculated drawdown after 20 years (m)	Calculated drawdown at 500 m from the pumping borehole after 1 year (m)	Calculated drawdown at 500 m from the pumping borehole after 20 years (m)
3463	40.4500	-2.3830	33	24	22	1.68	3.95E-03	1.28E-02	6.49	9.82	11.51	0.41	1.91
8057	34.9333	-0.3170	62	53	14	0.72	1.65E-03	7.12E-03	6.50	9.91	11.64	0.31	1.80
7773	34.6000	-0.4000	64	45	3	15.6	3.59E-02	1.32E-01	6.56	9.96	11.69	0.37	1.88
6209			73	30	30	7.5	1.66E-02	1.14E-01	6.45	9.98	11.78	0.16	1.59
8436	36.3500	2.2000	82	22	9	0.9	1.98E-03	1.49E-02	6.43	9.99	11.79	0.14	1.55
5373			32	13	6	3.3	7.05E-03	4.07E-02	6.79	10.45	12.31	0.23	1.76
4415			73	96	27	13.5	2.88E-02	1.69E-01	6.79	10.46	12.32	0.22	1.75
4729			43	6	3	12.54	2.99E-02	1.55E-02	7.42	10.70	12.37	1.26	2.90
8262			64	80	45	9	1.96E-02	6.56E-02	6.99	10.58	12.41	0.43	2.05
5562	36.6833	-1.3170	11	116	65	6	1.30E-02	4.18E-02	7.05	10.66	12.50	0.45	2.08
8994	36.4167	-0.6670	76	61	15	6.3	1.36E-02	3.85E-02	7.16	10.78	12.62	0.50	2.17
6292	36.6500	-1.2330	21	108	73	4.8	1.01E-02	4.67E-02	7.03	10.75	12.64	0.31	1.92
4767			21	114	45	9.66	2.07E-02	5.60E-02	7.24	10.89	12.74	0.53	2.21
5367	36.6333	-1.1670	21	153	141	7.5	1.53E-02	7.09E-02	7.25	11.09	13.03	0.32	1.98
5343	36.6333	-1.2000	21	126	97	9.3	1.89E-02	9.10E-02	7.25	11.10	13.06	0.31	1.96
4189	36.9000	-1.1830	21	118	8	21.96	4.26E-02	2.38E-01	7.50	11.53	13.58	0.26	1.96
4419			11	100	21	17.58	3.57E-02	5.62E-02	7.99	11.84	13.80	0.83	2.68
5348	36.6333	-1.1830	21	148	124	6.6	1.26E-02	6.92E-02	7.63	11.73	13.81	0.27	2.00
5482	34.7333	0.4168	93	25	18	1.92	3.61E-03	1.46E-02	7.96	12.13	14.24	0.41	2.24
5686	34.7000	0.3833	93	29	5	1.92	3.71E-03	6.26E-03	8.35	12.40	14.45	0.84	2.77
7406	37.6333	0.4667	42	21	9	8.52	1.63E-02	2.10E-02	8.62	12.71	14.79	1.00	2.98
5685	34.7167	0.3833	93	31	13	1.8	3.14E-03	1.59E-02	8.41	12.90	15.18	0.34	2.25
7667	35.6167	3.0000	82	57	41	6.54	1.12E-02	8.09E-02	8.29	12.86	15.18	0.19	2.02
4719			52	66	37	5.4	9.04E-03	6.11E-02	8.54	13.21	15.58	0.22	2.12
6986	34.4167	0.2000	63			1.98	3.29E-03	2.88E-02	8.75	13.36	15.75	0.25	2.19
5237	35.6000	3.1333	62	10	8	0.84	1.39E-03	7.80E-03	8.79	13.51	15.92	0.31	2.29
4849			21	62	16	9.54	1.62E-02	5.00E-02	9.03	13.64	15.98	0.59	2.69
5552			32	18	18	13.2	2.24E-02	5.59E-02	9.20	13.81	16.15	0.71	2.85
6368	36.6667	-1.1830	21	80	34	10.08	1.65E-02	6.75E-02	9.14	13.92	16.35	0.46	2.56
6293			21	125	32	7.98	1.27E-02	7.52E-02	9.09	14.01	16.50	0.29	2.34
4992	35.4167	4.5833	82	42	40	5.88	8.98E-03	8.49E-02	9.07	14.19	16.79	0.10	2.05
8895	35.4667	4.1333	82	41	19	1.8	2.82E-03	1.16E-02	9.54	14.54	17.07	0.48	2.67
3625	37.8500	1.5833	45	3	6	10.8	1.85E-02	1.11E-02	10.22	14.79	17.11	1.65	3.92
4219	38.3833	-3.5500	35	16	5	27.18	4.35E-02	8.50E-02	9.94	14.82	17.29	0.91	3.22
4140	36.8667	-1.2170	11	96	95	7.38	1.15E-02	1.98E-02	10.34	15.36	17.91	0.32	3.42
4791			11	240	145	5.76	8.15E-03	5.49E-02	10.13	15.67	18.49	0.27	2.52
8056	34.8833	-0.3170	62	65	16	0.72	1.03E-03	5.07E-03	10.28	15.75	18.53	0.42	2.77
7656	35.8167	4.2667	82	27	3.96	3.96	5.55E-03	3.65E-02	10.22	15.81	18.64	0.28	2.56
4658	36.9833	-1.3830	44	90	33	33.6	4.62E-02	3.61E-01	10.25	15.95	18.83	0.20	2.45
4848			52	84	71	4.8	6.65E-03	3.80E-02	10.48	16.12	18.99	0.36	2.72
4848			21	80	62	17.64	2.82E-02	7.26E-03	11.65	16.55	19.03	2.44	4.90
4742			44	78	41	9.84	1.41E-02	3.17E-02	10.99	16.45	19.23	0.92	3.47
6556	35.6333	2.1167	82	30	15	0.36	4.86E-04	3.07E-03	10.61	16.39	19.32	0.31	2.69
4870			44	2	2	17.04	2.31E-02	1.41E-01	16.41	16.41	19.35	0.33	2.71
4697			76	12	11	5.4	7.28E-03	4.71E-02	10.84	16.45	19.40	0.30	2.67

Table C3.7 (4/17) Drawdown analyses

B/H no.	Longitude	Latitude	District code	Water level	Struck	Rest	Yield	Transmissivity	Storage coefficient	Calculated drawdown after 1 day	Calculated drawdown after 1 year	Calculated drawdown after 20 years	
				(m)	(m)	(m)	(m <sup>3</sup> /hr)	(m <sup>2</sup> /min)		(m)	(m)	(m)	
7635	35.5333	4.1670	82	8	4	3	4.12E-03	1.74E-02	10.86	16.56	19.45	0.53	3.02
7634	35.7833	4.5833	82	13	4	0.78	1.04E-03	7.49E-03	10.66	16.52	19.50	0.25	2.60
4924			76	152	148	7.02	9.37E-03	4.19E-02	11.12	16.98	19.96	0.51	3.06
5265	36.8833	-1.2330	11	125	75	9	1.18E-02	5.79E-02	11.22	17.19	20.22	0.47	3.02
8433	36.1333	2.2000	82	69	19	4.8	6.17E-03	3.43E-02	11.32	17.41	20.50	0.40	2.96
6277	36.6500	-1.2330	21	60	40	11.22	1.37E-02	1.05E-01	11.57	17.98	21.23	0.24	2.78
8119	34.8167	-0.1500	62	40	7	1.8	2.39E-02	2.90E-02	12.48	18.37	21.36	1.50	4.36
5661	34.8000	0.4000	93	18	6	1.92	2.37E-03	1.20E-02	11.89	18.23	21.45	0.47	3.18
7346	40.6833	-2.4000	33	12	10	3.6	4.59E-02	9.33E-02	12.46	18.60	21.71	1.11	4.01
4235	39.8667	-0.4170	51	109	101	3.9	4.80E-03	1.80E-02	12.25	18.60	21.83	0.68	3.50
4735			11	46	4	9.12	1.10E-02	4.94E-02	12.30	18.79	22.08	0.56	3.38
8810	34.1667	0.5000	92	28	5	9	1.07E-02	4.25E-02	12.61	19.20	22.54	0.66	3.56
4871	36.8167	-1.0830	21	85	64	20.46	2.40E-02	7.32E-02	13.08	19.75	23.14	0.87	3.90
4605			35	6		3.6	3.92E-03	1.66E-02	13.69	20.88	24.53	0.67	3.81
6624			64	40	22	6	5.29E-03	7.23E-01	11.69	20.56	25.07	0.42	0.42
4442	35.3633	-1.1000	78	60	13	9.18	9.77E-03	3.74E-02	14.14	21.49	25.22	0.76	4.02
4259	36.7500	-1.1670	21	187	91	0.06	6.10E-05	4.73E-04	13.88	21.58	25.48	0.28	3.32
4847			11	110	74	7.92	8.11E-03	4.26E-02	14.28	21.93	25.81	0.54	3.78
6093	36.8833	-1.1170	21	70	33	19.8	1.98E-02	1.25E-01	14.38	22.21	26.18	0.42	3.64
5868	35.3333	2.8667	82	13	5.1	1.38	1.39E-03	7.35E-03	14.51	22.28	26.23	0.55	3.84
4453			51	114	110	6	5.85E-03	5.28E-02	14.26	22.29	26.37	0.19	3.27
5871	35.9333	2.0000	82	14	6.7	7.2	7.20E-03	3.05E-02	14.91	22.74	26.71	0.73	4.15
6531	35.7167	4.3000	82	26	1.1	1.98	1.95E-03	1.10E-02	14.76	22.70	26.73	0.51	3.84
4459			11	10	34	27.6	3.06E-02	1.13E-02	16.37	23.43	27.01	3.10	6.63
9400	40.0667	-3.2000	31	32	27	2.4	2.37E-03	9.40E-03	15.19	23.11	27.14	0.79	4.29
6874	34.1500	-0.7170	64	49	26	9.6	9.52E-03	3.11E-02	15.38	23.28	27.28	0.96	4.53
6875	34.1500	-0.7000	64	62	33	15.96	1.63E-02	2.56E-02	15.89	23.55	27.44	1.66	5.33
4981			44	56	35	6.72	6.59E-03	2.31E-02	15.46	23.44	27.49	0.91	4.48
7652	35.1000	3.2833	82	38		2.4	2.34E-03	7.38E-03	15.70	23.72	27.80	1.01	4.65
5509			32	22	15	1.2	1.08E-03	6.43E-03	16.07	24.76	29.18	0.52	4.12
5118	40.0833	-3.0830	31	80	36	11.28	1.02E-02	4.95E-02	16.29	24.94	29.34	0.68	4.40
5845	36.0667	2.0500	82	25	22	1.8	1.57E-03	9.93E-03	16.49	25.46	30.01	0.48	4.17
3656	39.7500	1.3167	53	15	14	0.36	3.39E-04	3.82E-04	17.70	26.01	30.23	2.20	6.25
6550	36.0833	-1.3333	82	48	26	1.2	1.04E-03	5.04E-03	17.00	26.03	30.61	0.72	4.59
4403	36.6500	-0.7830	24	106	43	5.4	4.76E-03	1.06E-02	17.88	26.76	31.27	1.50	5.66
5849	35.6500	2.4667	82	8	1.5	5.52	4.61E-03	1.98E-02	17.83	27.20	31.96	0.86	4.95
3753	39.4833	0.8667	51	94	91	4.5	3.77E-03	1.48E-02	17.92	27.26	32.00	0.95	5.07
5650	34.5000	3.5000	82	14	4.6	6	4.88E-03	3.00E-02	17.73	27.35	32.23	0.54	4.51
5687	34.7167	0.4833	93	36	5	1.92	1.58E-03	7.31E-03	17.98	27.49	32.32	0.80	4.91
3882	35.5500	-1.0330	78	49	46	8.22	6.69E-03	3.41E-02	18.02	27.63	32.52	0.71	4.81
3541	39.5667	2.4833	53	18	17	2.94	2.39E-03	8.87E-03	18.56	28.18	33.07	1.03	5.32
4144	36.9667	-1.4330	44	127	41	3.18	1.15E-03	1.15E-02	18.69	28.57	33.58	0.84	5.12
7303	36.8000	-1.2670	11	142		3.54	2.75E-03	1.33E-02	18.97	29.04	34.16	0.80	5.12
5918	34.3500	0.3167	92	42	10	1.62	1.27E-03	5.11E-03	19.11	29.09	34.16	0.98	5.38
7787	34.1000	-0.0170	63	32	11	1.9	1.41E-02	5.58E-02	19.15	29.14	34.21	1.00	5.41

Table C3.7 (5/17) Drawdown analyses

B/H no.	Longitude	Latitude	District code	Water level Struck (m)	Rest (m)	Yield (m <sup>3</sup> /hr)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient	Calculated drawdown after 1 day (m)	Calculated drawdown after 1 year (m)	Calculated drawdown after 20 years (m)
4220	34.8667	3.7167	82	70	25	8.88	6.78E-03	4.27E-02	18.84	29.09	34.29
4108	37.5667	2.5000	45	30	12	3.78	2.91E-03	1.53E-02	19.00	29.16	34.32
6365	36.0667	0.6667	71	42	22	1.5	1.14E-03	6.56E-03	19.09	29.38	34.61
6301	37.6833	-1.9500	44	90	46	5.28	4.03E-03	2.04E-02	19.23	29.48	34.68
6549	36.0833	1.3667	82	37	26	1.8	1.37E-03	6.87E-03	19.30	29.58	34.80
4802			35	7	0	7.08	5.40E-03	2.49E-02	19.40	29.66	34.87
4146	35.4633	0.6833	72	176	47	8.58	6.34E-03	5.43E-02	18.92	29.51	34.88
4836	35.0833	-0.8330	62	60	22	10.86	8.32E-03	2.62E-02	19.98	30.19	35.38
5375	36.6500	-1.2330	21	88	76	6.9	5.07E-03	3.60E-02	19.36	30.01	35.42
8990	36.7500	0.8333	75	73	34	1.98	1.52E-03	2.74E-03	20.90	31.09	36.27
6571	34.9500	3.7000	82	55	44	3	2.14E-03	1.38E-02	20.12	31.09	36.66
5557			32	16	9	1.92	1.37E-03	6.86E-03	20.59	31.55	37.12
6005			73	80	26	12	8.45E-03	4.08E-02	20.93	32.04	37.68
5906			32			0.72	5.29E-04	9.68E-04	21.81	32.46	37.87
6248	35.2167	1.9667	84	33	24	1.62	1.11E-03	7.99E-03	20.74	32.16	37.96
4207	40.1333	1.7500	53	34	7	0.3	2.04E-04	1.67E-03	20.64	32.15	37.99
4580	36.6667	-1.3000	11	132	26	4.68	3.14E-03	3.01E-02	20.61	32.27	38.20
8892	35.7000	3.5167	82	49	31	0.852	5.81E-04	3.98E-03	20.93	32.41	38.23
5657	35.6167	3.1167	82	13	10	11.88	8.15E-03	4.91E-02	21.06	32.46	38.25
7770	34.5667	-0.4170	64	92	60	1.56	1.08E-03	5.26E-03	21.27	32.57	38.31
5834	35.4000	2.9167	82	17	8	6.9	4.74E-03	2.65E-02	21.17	32.56	38.35
5934	34.4500	0.4333	92	22	10	0.24	1.59E-04	1.54E-03	20.85	32.66	38.56
5264			11	124	68	28.08	1.91E-02	1.03E-01	21.45	32.96	38.80
8454	37.0000	-2.0000	73	40	2	1.8	1.28E-02	2.50E-02	22.41	33.42	39.00
6585	35.4333	4.9333	82	6	2	2.1	1.42E-03	6.16E-03	22.01	33.58	39.45
7636	35.6000	4.3000	82	10	5	2.4	1.61E-03	7.79E-03	21.97	33.63	39.55
7632	36.7667	0.3833	42	14	12	10.62	7.12E-03	3.33E-02	22.05	33.72	39.64
3673	36.7667	-1.1830	21	85	45	0.64	3.48E-04	3.21E-03	21.54	33.68	39.84
6756	34.2667	-0.4670	64	33	22	1.62	1.05E-03	7.19E-03	22.02	34.10	40.23
6330	39.6333	0.4000	51	94	9	4.8	3.14E-03	1.48E-02	22.58	34.54	40.61
6541	35.3667	2.7333	82	41	24	12	7.84E-03	3.73E-02	22.59	34.57	40.65
5864	36.3667	2.6667	82	7	4	2.4	1.57E-03	6.83E-03	22.74	34.70	40.78
3782	38.6333	3.5500	45	59	43	1.62	1.05E-03	5.03E-03	22.75	34.83	40.96
8997	35.1167	0.8833	81	25	0	7.98	5.09E-03	2.16E-02	23.37	35.64	41.87
3839	37.0167	-2.3330	73	46	41	10.2	6.37E-03	2.71E-02	23.87	36.40	42.76
5512			32	22	12	3.3	2.01E-03	1.26E-02	23.63	36.48	43.00
5365	36.9000	-1.2670	11	110	77	7.2	4.39E-03	1.78E-02	24.55	37.39	43.90
6921	34.1333	-0.6830	64	18	12	5.4	3.29E-03	1.33E-02	24.58	37.42	43.94
9002	36.9167	-1.2670	11	152	80	13.8	6.45E-03	2.08E-02	25.53	38.31	44.80
4466			11	70	41	6.6	3.81E-03	2.59E-02	24.74	38.30	45.18
7673	34.3667	4.2000	82	40	17	10.26	5.77E-03	4.69E-02	24.98	38.89	45.96
3695	40.2833	0.1000	51	117	107	9	5.20E-03	2.11E-02	25.91	39.45	46.33
6239	35.1000	1.9667	84	76	27	3.18	1.77E-03	1.20E-02	25.67	39.73	46.87
6245	35.1000	1.9167	84	30	10	0.48	2.66E-04	1.68E-03	25.95	40.07	47.24
8048	34.8167	-0.3500	62	102	34	4.8	2.71E-03	1.08E-02	26.55	40.41	47.45

Table C3.7 (6/17) Drawdown analyses

B/M No.	Longitude	Latitude	District code	Water level Struck (m)	Rest (m)	Yield (m <sup>3</sup> /hr)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient	Calculated drawdown of a pumping borehole after 1 day after 1 year after 20 years (m)	Calculated drawdown at 500 m from the pumping borehole after 1 year after 20 years (m)			
6543	35.2000	2.7167	82	37	29	3.36	2.09E-03	9.39E-04	28.76	41.34	47.72	5.13	11.41
4270	40.1167	0.0667	51	134	130	7.2	4.09E-03	1.16E-02	27.19	40.96	47.96	1.91	8.22
4446			11	70	49	6.6	3.58E-03	2.54E-02	26.23	40.66	47.98	0.63	6.43
4758			11	240	44	1.8	9.78E-04	5.58E-03	26.72	41.12	48.43	0.91	6.93
6552	36.1000	2.2500	82	34	20	3.6	1.95E-03	1.07E-02	26.90	41.34	48.68	0.97	7.05
5217	35.0667	0.9667	84	80	24	3.6	1.90E-03	1.45E-02	26.77	41.60	49.13	0.56	6.43
5143	36.1167	-0.2670	76	60	35	18	9.72E-03	3.84E-02	27.79	42.28	49.63	1.46	7.85
5263			11	130	95	32.1	1.72E-02	7.53E-02	27.75	42.35	49.77	1.31	7.67
5276	36.7500	-0.2930	76	189	50	10.26	5.26E-03	3.25E-02	28.11	43.37	51.12	0.86	7.15
5225	34.9833	1.2000	84	33	26	0.66	2.91E-04	2.57E-02	24.68	42.43	51.44	1.57	4.57
7757	38.0333	0.2667	46	15	15	3.06	1.56E-03	8.98E-03	28.45	43.80	51.59	0.96	7.37
4179	40.4833	-0.7670	51	104	101	3.48	1.78E-03	8.41E-03	28.87	44.17	51.94	1.25	7.84
8047	35.0000	-0.2830	62	75	44	2.4	1.22E-03	5.49E-03	29.18	44.57	52.39	1.33	8.01
6099	36.6500	-1.3670	73	124	40	13.44	6.59E-03	5.78E-02	28.44	44.40	52.50	0.41	6.57
5324	36.2000	-0.3830	76	127	16	16.2	8.00E-03	5.82E-02	28.74	44.59	52.63	0.66	7.00
7427	37.5667	0.4333	42	65	46	1.86	9.20E-04	6.05E-03	28.97	44.79	52.82	0.80	7.25
8999	36.8500	-1.3000	11	181	125	7.98	4.07E-03	1.40E-02	29.78	45.12	52.91	1.78	8.67
6211	36.6833	-1.3830	73	46	42	3	1.46E-03	1.27E-02	28.68	44.76	52.92	0.42	6.64
6484			73	30	33	12	5.86E-03	4.64E-02	28.84	44.66	53.00	0.55	6.86
6870	34.1333	-0.5670	64	55	2.4	1.17E-03	8.64E-03	8.64E-03	29.08	45.13	53.28	0.65	7.05
5241			82	90	25	2.88	1.42E-03	6.75E-03	29.93	45.60	53.86	1.29	8.12
5943	34.3333	0.4833	92	30	8	7.92	3.97E-03	1.28E-02	30.47	46.08	54.01	1.93	8.99
6242	35.2167	2.2667	84	30	33	0.9	4.44E-04	1.96E-03	30.12	45.98	54.03	1.41	8.30
4559	37.5833	-0.4170	41	120	29	6	2.93E-03	1.58E-02	29.88	45.90	54.04	1.10	7.86
7566	34.5167	-0.4170	64	96	55	1.60002	7.81E-04	4.08E-03	29.98	46.01	54.15	1.15	7.95
5927	34.2667	0.2667	92	53	7	1.44	6.97E-04	4.06E-03	29.93	46.10	54.31	0.99	7.73
6228	37.0667	-1.3000	11	11	11	9.06	4.44E-03	1.92E-02	30.37	46.34	54.45	1.45	8.41
4685			21	120	50	13.62	6.65E-03	2.87E-02	30.49	46.52	54.65	1.46	8.45
3783	38.2500	-3.7170	35	85	50	9.72	4.69E-03	2.49E-02	30.28	46.50	54.74	1.14	8.00
5861	25.5000	2.0000	82	20.5	10	0.798	3.80E-04	2.12E-03	30.55	46.98	55.32	1.08	7.97
4812			21	93	79	4.86	2.34E-03	1.01E-02	30.92	47.17	55.42	1.48	8.57
6754	34.2667	-0.5670	64	60	34	1.62	7.69E-04	3.81E-03	30.98	47.46	55.83	1.27	8.32
5168			82	97	2.7	2.7	1.28E-03	6.02E-03	31.16	47.67	56.05	1.36	8.47
5410			44	25	12	0.3	1.37E-04	1.17E-03	30.62	47.75	56.45	0.48	7.12
5859	35.5000	1.5000	82	49	39	6	2.82E-03	1.32E-02	31.44	48.09	56.55	1.38	8.56
4902			11	123	30	1.92	8.79E-04	6.09E-03	31.15	48.24	56.92	0.78	7.69
3899	40.0167	2.4167	53	41	31	9.12	4.28E-03	1.54E-02	32.24	48.91	57.38	1.85	9.29
5232			31	82	54	10.26	5.32E-03	1.94E-03	35.03	50.12	57.78	6.66	14.22
5926	34.2833	0.3667	92	33	10	1.32	6.03E-04	3.23E-03	31.96	49.09	57.79	1.19	8.42
5235	38.3667	-2.6500	44	4	3	1.32	6.03E-04	3.05E-03	32.13	49.26	57.95	1.28	8.58
6006	36.6500	-1.2000	21	37	93	6.54	2.99E-03	1.45E-02	32.22	49.34	58.03	1.35	8.70
4939	39.8000	-3.8330	31	38	27	18	8.00E-03	5.07E-02	32.35	49.96	58.89	0.95	8.17
6975			44	64	55	9	3.97E-03	2.84E-02	32.23	49.97	58.98	0.76	7.88
8122	34.9833	-0.2670	62	79	31	9	4.12E-03	1.34E-02	33.34	50.43	59.11	2.09	9.82
5224	35.0167	1.2667	84	42	37	2.04	8.91E-04	6.12E-03	32.67	50.59	59.69	0.84	8.08
3857	37.0000	0.0167	75	121	59	4.68	2.09E-03	8.45E-03	33.53	51.05	59.95	1.72	9.43



Table C3.7 (7/17) Drawdown analyses

B/M no.	Longitude	Latitude	District code	Water level Struck (m)	Rest (m)	Yield (m <sup>3</sup> /hr)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient	Calculated drawdown after 1 day (m)	Calculated drawdown after 1 year (m)	Calculated drawdown after 20 years (m)	Calculated drawdown at 500 m from the pumping borehole after 1 year (m)	Calculated drawdown at 500 m from the pumping borehole after 20 years (m)
4233	37.6667	-0.2330	46	109	66	5.76	2.58E-03	6.84E-03	34.68	52.15	61.02	2.57	10.63
5933	34.2883	0.4500	92	25	11	1.02	4.38E-04	2.15E-03	34.27	52.49	61.75	1.42	9.22
4113	37.5000	2.0000	45	22	14	0.3	1.25E-04	1.01E-03	33.73	52.51	62.05	0.61	7.98
5518			11	192	149	7.68	3.27E-03	1.23E-02	36.39	53.77	63.10	1.95	10.11
5507			32	15	9	16.5	6.71E-03	4.78E-02	34.97	54.21	63.98	0.84	8.57
7660			82	9	2	4.2	1.72E-03	9.82E-03	36.45	54.55	64.25	1.21	9.20
5357	35.4333	3.5333	11	4	10	2.46	1.01E-03	4.90E-03	35.88	54.94	64.62	1.51	9.68
4804			21	122	63	12	4.96E-03	1.76E-02	36.64	55.58	65.19	2.13	10.60
5819			76	36	57	9	3.66E-03	1.78E-02	36.22	55.46	65.23	1.52	9.77
5399	36.8333	-1.3500	11	150	98	13.08	5.32E-03	2.24E-02	36.68	55.92	65.69	1.80	10.22
6750	34.3167	-0.4830	64	54	24	3.6	1.46E-03	6.48E-03	36.62	55.91	65.71	1.70	10.09
3430	34.9667	3.7167	62	97	4.8	1.88E-03	1.25E-02	36.55	56.52	66.67	0.99	9.12	
6378	36.6333	-1.2500	21	118	100	6	2.36E-03	1.29E-02	37.05	56.95	67.05	1.34	9.72
6244	35.0833	1.9500	84	81	12	1.68	6.59E-04	3.61E-03	37.14	57.09	67.22	1.34	9.74
4180			75	84	19	13.2	5.23E-03	2.08E-02	37.65	57.60	67.62	1.97	10.68
5669			70	62	7	16.26	6.37E-03	3.10E-02	37.59	57.57	67.71	1.57	10.14
6362	36.0500	0.5500	71	50	12	0.72	2.76E-04	1.40E-03	38.03	58.29	68.58	1.53	10.17
5914			73	16	4	2.4	9.32E-04	4.08E-03	38.29	58.44	68.67	1.80	10.58
5496	36.8333	-1.2170	11	118	92	7.98	3.14E-03	9.88E-03	38.90	58.78	68.88	2.51	11.53
7679	34.5833	3.7500	82	50	11	4.26	1.62E-03	1.01E-02	37.86	58.44	68.67	1.14	9.61
7579	34.5167	-0.5170	64	45	15	2.4	9.15E-04	4.53E-03	36.57	59.09	68.89	1.58	10.36
4878			44	28	2	2.88	1.06E-03	5.70E-03	39.65	60.92	71.71	1.47	10.44
6867	34.1333	-0.5500	64	57	25	5.76	2.13E-03	9.41E-03	40.17	61.33	72.08	1.88	11.08
5867	35.3667	2.4833	82	33	10	1.2	4.39E-04	2.31E-03	39.97	61.36	72.22	1.52	10.58
8446	34.1667	3.7333	82	33	8	0.96	2.11E-03	2.11E-03	39.82	61.41	72.37	1.25	10.18
5560			22	24	11	7.92	2.89E-03	1.48E-02	40.18	61.62	72.51	1.58	10.70
6686	34.0167	-0.8000	64	42	16	4.8	1.78E-03	6.56E-03	40.71	61.81	72.52	2.28	11.68
5027			11			13.02	4.97E-03	9.79E-03	41.72	62.22	72.63	3.80	13.49
3788	40.9500	0.4333	53	101	96	5.76	2.13E-03	7.86E-03	40.82	61.98	72.72	2.29	11.71
7680	34.6000	3.7500	82	24	6	1.38	5.05E-04	2.26E-03	40.55	61.93	72.79	1.87	11.15
4521			11	132	10	1.2	4.31E-04	2.48E-03	40.39	62.17	73.23	1.36	10.46
4813			31	64	44	15.6	5.97E-03	9.06E-03	42.52	62.97	73.35	4.53	14.35
8465	37.5000	0.5000	42	102	27	0.3	1.05E-04	9.41E-04	39.76	62.12	73.47	0.53	9.12
7416	37.9500	0.0833	46	72	39	6.06	2.17E-03	1.19E-02	40.69	62.54	73.63	1.47	10.66
4365			45	36	34	13.38	4.77E-03	2.58E-02	40.92	62.87	74.01	1.50	10.76
6364	36.8333	0.8000	71	102	32	2.52	9.24E-04	2.22E-03	42.72	64.06	74.90	3.40	13.33
4887			43	76	4	1.68	5.81E-04	3.89E-03	41.36	63.99	75.48	1.11	10.30
4561			42	26	17	4.2	1.46E-03	7.91E-03	41.96	64.47	75.90	1.54	11.03
4699			42	94	30	6	2.03E-03	1.87E-02	41.03	64.16	75.90	0.50	9.34
5227	36.0333	1.1500	84	30	33	0.54	1.88E-04	9.01E-04	42.36	64.84	76.25	1.80	11.46
4445	36.4167	-0.1170	76	1	1	1.14	3.84E-04	3.28E-03	41.51	64.74	76.53	0.65	9.66
5894			73	62	70	13.2	4.63E-03	1.69E-02	43.08	65.38	76.71	2.44	12.38
5827	36.6667	4.2500	82	70	27	1.35	4.58E-04	2.97E-03	42.29	65.35	77.06	1.19	10.62
4116	36.0500	-0.4830	76	210	160	7.98	2.75E-03	1.30E-02	42.85	65.56	77.08	1.85	11.63
4978	37.5167	-2.0000	44	18	2	2.4	8.37E-04	3.07E-03	43.30	65.74	77.13	2.44	12.44

Table C3.7 (8/17) Drawdown analyses

B/H no.	Longitude	Latitude	District code	Water level Struck (m)	Rest (m)	Yield (m <sup>3</sup> /hr)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient	Calculated drawdown after 1 day (m)	Calculated drawdown after 1 year (m)	Calculated drawdown at 500 m from the pumping borehole after 1 year (m)	Calculated drawdown at 500 m from the pumping borehole after 20 years (m)	
4233	37.6667	-0.2330	46	109	66	5.76	2.58E-03	6.64E-03	34.68	52.15	61.02	2.57	10.63
5933	34.2883	0.4500	92	25	11	1.02	4.38E-04	2.15E-03	34.27	52.49	61.75	1.42	9.22
4113	37.5000	2.0000	45	22	14	0.3	1.25E-04	1.01E-03	33.73	52.51	62.05	0.61	7.98
5518			11	192	149	7.68	3.27E-03	1.23E-02	35.39	53.77	63.10	1.95	10.11
5507			32	15	9	16.5	6.71E-03	4.78E-02	34.97	54.21	63.98	0.84	8.57
7660	35.4333	3.5333	82	9	2	4.2	1.72E-03	9.82E-03	35.45	54.55	64.25	1.21	9.20
5357			11	4	10	2.46	1.01E-03	4.90E-02	35.88	54.94	64.62	1.51	9.68
4804			21	122	63	12	4.96E-03	1.76E-02	36.64	55.58	65.19	2.13	10.60
5819			76	36	57	9	3.66E-03	1.78E-02	36.22	55.46	65.23	1.52	9.77
5399			11	150	98	13.08	5.32E-03	2.24E-02	36.68	55.92	65.69	1.80	10.22
6750	34.3167	-0.4830	84	54	24	3.6	1.46E-03	6.48E-03	36.62	55.91	65.71	1.70	10.09
8430	34.9667	3.7167	82	97		4.8	1.88E-03	1.25E-02	36.55	56.52	66.67	0.99	9.12
6378	36.6333	-1.2500	21	118	100	6	2.36E-03	1.29E-02	37.05	56.95	67.05	1.34	9.72
6244	34.3167	-0.4830	84	81	12	1.68	6.59E-04	3.61E-03	37.14	57.09	67.22	1.34	9.74
4180	35.0833	1.9500	75	84	19	13.2	5.23E-03	2.08E-02	37.85	57.60	67.62	1.97	10.68
5669			73	62	7	16.26	6.37E-03	3.10E-02	37.59	57.57	67.71	1.57	10.14
6362	36.0500	0.5500	71	50	12	0.72	2.78E-04	1.40E-03	38.03	58.29	68.58	1.53	10.17
5914			73	16	4	2.4	9.32E-04	4.08E-03	38.29	58.44	68.67	1.80	10.58
5496	36.8333	-1.2170	11	118	92	7.98	3.14E-03	9.88E-03	38.90	58.78	68.88	2.51	11.53
7679	34.5833	3.7500	82	50	11	4.26	1.62E-03	1.01E-02	37.86	58.44	68.89	1.14	9.61
7579	34.5167	-0.5170	64	45	15	2.4	9.15E-04	4.53E-03	38.57	59.09	69.52	1.58	10.36
4878			44	28	2	2.88	1.06E-03	5.70E-03	39.65	60.92	71.71	1.47	10.44
6867	34.1333	-0.5500	64	57	25	5.76	2.13E-03	9.41E-03	40.17	61.33	72.08	1.88	11.08
5867	35.0667	2.4333	82	33	10	1.2	4.39E-04	2.31E-03	39.97	61.36	72.22	1.52	10.58
8446	34.1667	3.7333	82	33	8	0.96	3.48E-04	2.11E-03	39.82	61.41	72.37	1.25	10.18
5560			22	24	11	7.92	2.89E-03	1.48E-02	40.18	61.62	72.51	1.58	10.70
6686	34.0167	-0.8000	64	42	16	4.8	1.78E-03	6.56E-03	40.71	61.81	72.52	2.28	11.68
5027			11			13.02	4.97E-03	9.79E-03	41.72	62.22	72.63	3.80	13.49
3788	40.0500	0.4333	53	101	96	5.76	2.13E-03	7.86E-03	40.82	61.98	72.72	2.29	11.71
7680	34.6000	3.7500	82	24	6	1.38	5.05E-04	2.26E-03	40.55	61.93	72.79	1.87	11.15
4521			11	132	10	1.2	4.31E-04	2.48E-03	40.39	62.17	73.23	1.36	10.46
4813			31	64	44	15.6	5.97E-03	9.06E-03	42.52	62.97	73.35	4.53	14.35
8465	37.5000	0.5000	42	102	27	0.3	1.05E-04	9.41E-04	39.76	62.12	73.47	0.53	9.12
7416	37.9500	0.0833	46	72	39	6.06	2.17E-03	1.19E-02	40.69	62.54	73.63	1.47	10.66
4965			45	36	34	13.36	4.77E-03	2.58E-02	40.92	62.87	74.01	1.50	10.76
6364	36.0833	0.8000	71	102	32	2.52	9.24E-04	2.22E-03	42.72	64.06	74.90	3.40	13.33
4887			43	75	4	1.68	5.81E-04	3.89E-03	41.36	63.99	75.48	1.11	10.30
4561			42	26	17	4.2	1.46E-03	7.91E-03	41.96	64.47	75.90	1.54	11.03
4699			42	94	30	6	2.03E-03	1.87E-02	41.03	64.16	75.90	0.50	9.34
5227	35.0333	1.1500	84	30	33	0.54	1.88E-04	9.01E-04	42.36	64.84	76.25	1.80	11.46
4445	36.4167	-0.1170	76	1	1	1.14	3.84E-04	3.28E-03	41.51	64.74	76.53	0.65	9.66
5894			73	62	70	13.2	4.63E-03	1.69E-02	43.06	65.38	76.71	2.44	12.38
5827	35.6667	4.2500	82	70	27	1.35	4.58E-04	2.97E-03	42.29	65.35	77.06	1.19	10.62
4116	36.0500	-0.4830	76	210	160	7.98	2.75E-03	1.30E-02	42.85	65.56	77.08	1.85	11.62
4978	37.5167	-2.0000	44	18	2	2.4	8.37E-04	3.07E-03	43.30	65.74	77.13	2.44	12.44

Table C3.7 (9/17) Drawdown analyses

B/H no.	Longitude	Latitude	District code	Water level Rest (m)	Yield (m <sup>3</sup> /hr)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient	Calculated drawdown after 1 day (m)	Calculated drawdown after 1 year (m)	Calculated drawdown after 20 years (m)
8745			44	30	1.7	6.18	1.68E-03	53.53	82.31	96.93
7637	35.6333	5.0333	82	32	3	3	8.32E-04	55.10	83.31	97.64
8936	36.2833	-0.7500	76	48	9	40.62	4.54E-02	54.74	83.37	97.91
8051	34.8833	-0.2830	62	146	20	3.6	9.69E-04	54.22	83.30	98.06
5950			11	100	21	9	2.44E-03	54.83	83.69	98.35
8248	34.2833	-1.1000	64	29	7	6	4.97E-03	55.87	84.32	98.77
6279			32	11	8	1.32	3.47E-04	54.04	83.81	98.93
4456			21	120	59	19.8	5.37E-03	55.91	84.77	99.41
4770			21	172	21	12.54	3.29E-03	54.98	84.81	99.95
3747			73	11	6	9.06	2.31E-03	56.06	86.75	102.33
4408	36.7667	-1.8830	21	170	92	4.98	1.29E-03	57.16	87.37	102.71
8898	35.3167	2.7667	82	32	10	0.79998	2.03E-04	56.48	87.32	102.98
8138	34.0000	-0.1330	62	65	16	14.4	3.77E-03	58.08	87.97	103.14
8993	37.0167	0.0000	75	26	15	0.78	1.95E-04	56.70	88.00	103.89
4942	34.9500	1.5333	84	12	4	2.7	7.12E-04	59.58	89.25	104.32
8115	34.9167	-0.1670	62	42	4	1.8	4.58E-03	58.52	89.28	104.89
6912	34.2500	-0.9000	64	45	38	1.2	3.00E-04	57.86	89.16	105.05
5209			11	115	59	16.32	4.21E-03	59.67	90.01	105.41
5009	36.7833	-1.3830	73	103	45	6.72	1.65E-03	58.99	90.86	107.04
4148	36.7167	-1.3330	11	133	105	5.22	1.26E-03	58.88	91.30	107.76
5325	35.1667	-0.1170	62	116	16	13.92	3.40E-03	59.93	91.97	108.23
6612			21	124	46	22.02	5.31E-03	59.52	91.97	108.44
5922	34.3000	0.3667	92	22	4	1.14	2.76E-04	60.37	92.69	109.11
8900	35.2500	3.6000	82	24	6	1.2	1.46E-03	60.84	93.45	110.00
4538			11	28	6	7.2	1.71E-03	61.49	94.43	111.16
4473			82	30	22	5.28	1.24E-03	61.25	94.57	111.49
7659	36.3167	3.6333	82	32	32	1.98	4.69E-04	61.73	94.77	111.54
8243	37.0333	-0.4330	25	82	32	0.9	2.09E-04	60.94	94.64	111.75
5517			11	90	79	8.16	1.87E-03	61.11	95.25	112.59
3830	39.2500	1.2000	42	119	107	10.92	2.61E-03	63.38	96.12	112.75
5546	36.6500	-1.2330	21	98	71	12	2.75E-03	61.97	96.11	113.45
8045	34.8833	-0.2170	62	52	20	5.76	1.34E-03	63.21	96.85	113.93
7568	34.6500	-0.3830	64	34	10	4.5	1.03E-03	62.45	96.64	114.00
7756	38.0667	0.2667	46	30	16	3	6.86E-04	63.50	97.72	115.10
3462			75	37	18	1.2	2.75E-04	63.68	97.83	115.17
4517			76	180	96	15.66	3.47E-03	62.31	97.69	115.56
6614	36.3333	-0.1330	24	8	20	1.68	3.84E-04	64.13	98.35	115.74
3687	39.9667	0.4833	53	105	100	2.16	4.94E-04	64.43	98.64	116.02
3785	36.8167	-1.1500	21	73	34	9.12	2.09E-03	65.26	99.40	116.74
5013	36.7833	-1.3830	73	115	62	6.78	1.50E-03	63.84	99.21	117.17
5932	34.3000	0.2330	92	32	5	1.2	2.68E-04	64.41	99.44	117.23
6213	36.6333	-1.1670	21	145	130	9	1.47E-03	64.99	100.92	119.17
8437	36.4167	2.2833	82	24	8	4.5	9.98E-04	66.01	101.29	119.21
7219	37.2333	-1.7170	44	54	22	0.6	1.31E-04	65.69	101.53	119.72

Table C3.7 (10/17) Drawdown analyses

B/H no.	Longitude	Latitude	District code	Water level Struck Rest (m)	Yield (m <sup>3</sup> /hr)	Transmis- sivity (m <sup>2</sup> /min)	Storage coefficient	Calculated drawdown of a pumping borehole after 1 day after 1 year after 20 years (m)	Calculated drawdown at 500 m from the pumping borehole after 1 year after 20 years (m)			
6745			44	30	1.7	6.18	1.68E-03	53.53	82.31	96.93	1.90	13.98
7637	35.6333	5.0333	82	32	3	3	8.32E-04	55.10	83.31	97.64	3.50	16.26
8996	36.2833	-0.7500	76	46	9	40.62	4.54E-02	54.74	83.37	97.91	2.77	15.35
8051	34.8833	-0.2830	62	146	20	3.6	9.69E-04	54.22	83.30	98.06	2.01	14.28
5050			11	100	21	9	2.44E-03	54.83	83.69	98.35	2.58	15.14
8248	34.2833	-1.1000	64	29	7	6	1.65E-03	55.87	84.32	98.77	3.74	16.70
6279			32	11	8	1.32	3.47E-04	54.04	83.81	98.93	1.26	13.20
4456			21	120	59	19.8	5.37E-03	55.91	84.77	90.41	3.29	16.21
4770			21	172	21	12.54	3.29E-03	54.98	84.81	99.95	1.70	14.02
3747	36.7667	-1.8830	73	11	6	9.06	1.56E-02	56.06	86.75	102.33	1.48	13.93
4408			21	170	92	4.98	1.29E-03	57.16	87.37	102.71	2.56	15.63
8898	35.3167	2.7667	82	32	10	0.79998	2.03E-04	56.48	87.32	102.98	1.57	14.15
8138	34.9000	-0.1330	62	65	16	14.4	3.77E-03	58.08	87.97	103.14	3.51	16.95
8993	37.0167	0.0000	75	26	15	0.78	1.44E-03	56.70	88.00	103.89	1.26	13.75
4942	34.9500	1.5333	84	12	4	2.7	1.65E-03	59.58	89.25	104.32	4.87	18.72
8115	34.9167	-0.1670	62	42	4	1.6	1.97E-02	58.52	89.16	104.89	2.81	16.23
34.2500			64	45	38	1.2	1.78E-03	57.86	89.16	105.05	1.87	14.87
5209			11	115	59	16.32	1.24E-02	59.67	90.01	105.41	4.07	17.92
5009	36.7833	-1.3830	73	103	45	6.72	1.24E-02	58.99	90.86	107.04	1.95	15.22
4148	36.7167	-1.3330	11	133	105	5.22	9.64E-03	58.99	91.30	107.76	1.39	14.39
5325	35.1667	-0.1170	62	116	16	13.92	1.26E-03	58.88	91.50	108.23	2.31	15.90
6612			21	124	46	22.02	1.77E-02	59.52	91.97	108.44	1.69	14.96
5922	34.3000	0.3667	92	22	4	1.14	3.43E-02	60.37	92.69	109.11	2.28	15.96
8900	35.2500	3.6000	82	24	6	1.2	1.46E-03	60.84	93.45	110.00	2.27	16.04
4538			11	28	22	7.2	1.54E-03	61.49	94.43	111.16	2.29	16.21
4473			82	30	22	5.28	1.71E-03	61.25	94.57	111.49	1.81	15.50
7659	35.3167	3.6333	82	32	32	1.98	2.47E-03	61.73	94.77	111.54	2.35	16.34
8243	37.0333	-0.4330	25	82	32	0.9	7.81E-03	60.94	94.64	111.75	1.31	14.71
5517			11	90	79	8.16	1.57E-02	61.11	95.25	112.59	1.00	14.29
3830	39.2500	1.2000	42	119	107	10.92	1.57E-02	63.38	96.12	112.75	3.69	18.34
5546	36.6500	-1.2330	21	98	71	1.2	9.24E-03	61.97	96.11	113.45	1.44	15.11
8045	34.8833	-0.2170	62	52	20	5.76	1.99E-02	63.21	96.85	113.93	2.59	16.98
7568	34.6500	-0.3830	64	34	10	4.5	6.63E-03	62.45	96.64	114.00	1.65	15.52
7756	38.0667	0.2667	46	30	16	3	6.95E-03	63.50	97.72	115.10	2.18	16.49
8462			75	37	16	1.2	3.90E-03	63.68	97.83	115.17	2.35	16.76
4517			76	180	96	15.66	1.48E-03	62.31	97.63	115.56	0.59	13.94
6614	36.3333	-0.1330	24	8	20	1.68	3.38E-02	64.13	98.36	115.74	2.52	17.08
3687	39.9667	0.4833	53	105	100	2.16	1.97E-03	64.43	98.64	116.02	2.72	17.40
3785	36.8167	-1.1500	21	73	34	9.12	2.39E-03	64.43	99.40	116.74	3.29	18.29
5013	36.7833	-1.3830	73	115	62	6.78	8.57E-03	65.26	99.40	116.74	1.31	15.32
5932	34.3000	0.2333	92	32	5	1.2	1.15E-02	63.84	99.21	117.17	1.90	16.29
6213	36.5333	-1.1670	21	145	130	9	1.69E-03	64.41	99.44	117.23	1.40	15.69
8437	36.4167	2.2833	82	24	8	4.5	1.47E-02	64.99	100.92	119.17	1.40	15.69
7219	37.2333	-1.7170	44	54	22	0.6	5.19E-03	66.01	101.29	119.21	2.55	17.52
							8.53E-04	65.69	101.53	119.72	1.84	16.48

Table C3.7 (11/17) Drawdown analyses

B/H no.	Longitude	Latitude	District code	Water level Struck (m)	Rest (m)	Yield (m <sup>3</sup> /hr)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient	Calculated drawdown after 1 day (m)	Calculated drawdown after 1 year (m)	Calculated drawdown after 20 years (m)	Calculated drawdown at 500 m from the pumping borehole after 1 year (m)	Calculated drawdown at 500 m from the pumping borehole after 20 years (m)
4823			11	184	15	13.62	2.37E-03	1.04E-02	85.43	130.39	153.23	4.02	23.59
8118	34.8000	-0.2500	62	60	9	14.4	2.51E-03	1.04E-02	85.72	130.61	153.40	4.28	23.97
8134	34.9000	-0.1670	62	86	17	12	2.09E-03	6.76E-03	86.11	131.04	153.85	4.49	24.31
5031			83	6	4	7.74	1.33E-03	1.48E-02	85.37	130.91	154.03	3.39	22.79
4843	36.7500	-1.4170	73	35	56	9.84	1.04E-03	1.08E-03	83.45	130.40	154.24	1.09	19.11
5855	35.5167	2.5167	82	50	12	1.2	2.03E-04	1.08E-03	86.36	132.62	156.10	3.24	22.80
5114			11	206	56	6.06	1.02E-03	5.83E-03	86.23	132.72	156.33	2.94	22.37
8120	34.8500	-0.3170	62	66	7	12	2.03E-03	8.08E-03	88.64	134.89	158.38	4.61	25.01
3683	36.7333	-1.3330	11	153	85	7.62	1.26E-03	6.64E-03	88.43	135.75	159.78	3.36	23.40
6746	34.3667	-0.5670	64	50	19	3.6	5.86E-04	4.13E-03	87.46	135.53	159.94	2.13	21.48
5855	35.7500	4.2500	82	15	6	0.72	1.17E-04	7.37E-04	88.52	136.88	161.13	2.62	22.40
4101	36.7500	-1.2500	21	5	29	20.4	3.35E-03	1.68E-02	89.44	137.09	161.29	3.61	23.95
4898			11	186	17	16.48	3.07E-03	1.21E-02	90.34	137.44	161.36	4.75	25.55
8981	37.7333	-0.4670	41	102	5	3	4.89E-04	2.52E-03	89.89	137.89	162.27	3.51	23.91
4756			21	102	34	5.4	8.79E-04	4.22E-03	90.59	138.66	163.07	3.85	24.50
7640	34.8667	3.7167	82	22	2	1.2	1.93E-04	1.12E-03	90.12	138.77	163.48	3.01	23.29
7784	34.1833	-0.0830	63	33	20	7.98	1.30E-03	5.66E-03	91.31	139.34	163.73	4.33	25.26
5822			76	6	4.74	3.8	7.66E-04	3.79E-03	91.00	139.42	164.01	3.73	24.44
7576	34.5333	-0.4670	64	60	60	4.39998	7.32E-04	1.98E-03	93.21	140.24	164.13	6.80	28.45
6973	34.8667	3.7167	82	32	16	1.14	1.82E-04	1.06E-03	92.76	139.77	164.66	3.01	23.43
3781	39.4667	0.8167	51	94	92	6.84	1.11E-03	4.39E-03	92.45	140.67	165.15	4.84	26.12
4635	36.8667	-1.1670	21	78	21	16.2	2.57E-03	1.12E-02	93.76	143.08	168.13	4.44	25.93
4268	36.7833	-1.2330	11	142	52	5.4	8.47E-04	4.57E-03	93.02	142.91	168.24	2.43	24.47
5863	35.3667	2.6667	82	26	13	3.6	5.58E-04	3.77E-03	92.21	142.69	168.33	2.43	22.91
6951			42	16	11	2.4	3.66E-04	3.38E-03	91.00	142.31	168.37	1.09	20.69
5203			44	34	4	2.16	3.33E-04	1.98E-03	93.81	144.56	170.34	3.02	24.09
5801			21	130	42	18	2.75E-03	1.82E-02	93.73	144.95	170.95	2.56	23.41
3959	39.1000	3.4833	45	39	37	2.16	3.29E-04	2.13E-03	94.21	144.95	171.67	2.66	23.67
7428	37.3333	-1.0500	21	130	46	8.75	1.34E-03	7.25E-03	95.36	146.51	172.49	3.50	25.07
5144	36.8333	-1.0330	21	30	20	5.04	7.69E-04	4.32E-03	95.28	146.56	172.60	3.33	24.82
3815	36.8500	-1.2670	11	143	8	6.78	1.03E-03	6.02E-03	95.35	146.85	173.01	3.15	24.59
4293	36.9500	-1.4670	73	150	20	10.2	1.56E-03	7.70E-03	96.17	147.34	173.31	3.96	25.85
4922			11	272	18	5.16	7.87E-04	4.07E-03	96.03	147.34	173.39	3.73	25.52
4275	37.5333	-1.9500	44	50	42	4.56	6.68E-04	5.95E-03	95.06	148.48	175.60	1.30	21.85
8054	34.9333	-0.2670	62	137	5	4.32	6.37E-04	4.02E-03	97.54	150.61	177.55	2.87	24.67
4768			11	90	4	19.8	2.93E-03	1.31E-02	100.28	153.16	180.01	4.62	27.58
5029			76	138	88	3	4.44E-04	1.96E-03	100.38	153.26	180.10	4.69	27.68
6225	36.7500	-1.3330	11	92	47	3.72	5.39E-04	2.98E-03	100.48	154.48	181.90	3.58	26.28
6760	34.3333	-0.5670	64	78	20	0.9	1.27E-04	1.06E-03	99.30	154.75	182.91	1.66	23.26
8435	36.4167	2.2500	82	25	10	4.5	6.34E-04	4.28E-03	101.45	156.99	185.19	2.68	25.21
5351			11	150	106	3.78	5.38E-04	2.70E-03	103.19	158.17	186.08	4.16	27.62
5907			32	25	22	3.6	5.29E-04	9.68E-04	109.05	162.30	189.34	10.41	35.69
5904			32	25	24	3.6	5.29E-04	9.68E-04	109.05	162.30	189.34	10.41	35.69
5912			32	25	25	3.6	5.29E-04	9.68E-04	109.05	162.30	189.34	10.41	35.69
5909			32	30	28	3.6	5.29E-04	9.68E-04	109.05	162.30	189.34	10.41	35.69

Table C3.7 (12/17) Drawdown analyses

B/H no.	Longitude	Latitude	District code	Water level Struck (m)	Rest (m)	Yield (m <sup>3</sup> /hr)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient	Calculated drawdown after 1 day (m)	Calculated drawdown after 1 year (m)	Calculated drawdown after 20 years from the pumping borehole (m)	Calculated drawdown at 500 m after 20 years (m)
7574	34.5500	-0.4330	64	53	38	1.8	2.50E-04	1.41E-03	104.63	160.97	189.58	27.23
8058	35.0333	-0.3000	62	147	15	2.52	3.44E-04	2.33E-03	104.68	162.00	191.10	25.99
7418	35.0167	0.2833	46	78	46	3.6	4.85E-04	3.73E-03	104.81	162.89	192.39	25.13
8065	34.9167	-0.1670	62	64	10	5.4	7.39E-04	3.72E-03	107.29	164.47	193.50	28.70
5101			62	33	12	2.16	2.94E-04	1.59E-03	107.17	164.66	193.85	28.18
6320			76	80	102	1.98	2.66E-04	1.61E-03	107.47	165.72	195.29	27.48
5408			73	65	32	12.12	1.65E-03	7.52E-03	108.82	166.30	195.48	29.79
7417	37.9500	0.2667	46	72	51	2.64	3.52E-04	2.18E-03	108.06	166.75	196.54	27.46
7774	34.6500	-0.4330	64	43	11	1.62	2.14E-04	1.50E-03	107.83	167.06	197.14	26.63
6570	35.0167	3.8667	82	70	28	6.54	8.72E-04	4.94E-03	108.95	167.63	197.43	28.32
4686			21	81	40	26.4	3.48E-03	2.25E-02	108.87	168.23	198.37	27.36
8461			64	34	10	0.48	6.28E-05	4.68E-04	108.25	168.06	198.42	26.19
3686	40.5500	2.2500	53	120	106	0.96	1.26E-04	8.56E-04	108.84	168.46	198.73	27.00
6208	36.6667	-1.3330	73	60	32	1.2	1.57E-03	1.08E-02	109.06	168.87	199.24	26.96
4518	34.8500	-0.0170	62	21	9	6.72	8.91E-04	4.64E-03	110.40	169.42	199.38	29.29
3797	36.0833	-0.1330	76	166	23	13.5	1.80E-03	8.19E-03	111.13	169.81	199.61	30.43
6360			44	140	63	15.84	2.10E-03	1.03E-02	111.01	170.03	200.00	29.88
5661	35.4500	4.0167	92	30	20	2.64	3.45E-04	2.14E-03	110.24	170.11	200.52	28.01
4923			11	168	50	15	2.00E-03	8.25E-03	112.10	170.79	200.59	31.39
6361	36.8500	-1.2500	11	85	20	1.2	1.59E-04	6.31E-04	113.19	172.25	202.24	31.96
4199	36.6833	-1.4000	73	192	30	32.7	4.35E-03	1.57E-02	113.69	172.51	202.38	32.76
4739			44	106	33	10.86	1.39E-03	9.36E-03	111.70	172.84	203.88	27.77
4646			11	132	78	6.78	8.74E-04	4.56E-03	113.53	174.23	205.06	30.11
3852	40.7167	0.0167	51	109	107	6.9	8.94E-04	3.77E-03	115.14	175.53	206.20	32.08
7064	34.8167	0.3833	93	20	4	12	1.58E-04	4.55E-03	117.14	176.57	206.75	35.33
4840			11	154	38	4.08	5.28E-04	2.15E-03	115.63	176.10	206.80	32.47
7779	34.6667	-0.4330	64	15	1	0.78	9.76E-05	6.59E-04	114.23	176.76	208.52	28.38
5821			21	134	88	18	2.20E-03	1.40E-02	117.59	181.61	214.12	29.68
4622			21	65	38	12.36	1.51E-03	8.26E-03	119.26	183.31	215.83	31.25
5519			21	44	27	6	7.32E-04	4.02E-03	119.40	183.54	216.11	31.28
3715	34.3833	-1.0330	64	53	1	2.4	2.93E-04	1.52E-03	119.94	184.04	216.58	31.86
5355	39.7667	0.5667	53	104	98	5.22	6.44E-04	2.49E-03	121.85	185.27	217.48	34.60
7577			44	28	4	0.84	9.91E-05	9.19E-04	117.66	183.99	217.66	26.77
7577	34.9500	-0.2330	62	95	8	9	1.09E-03	5.63E-03	120.95	185.56	218.37	32.16
7785	34.2833	-0.2830	63	104	28	6	7.32E-04	3.16E-03	122.02	186.16	218.73	33.62
5826	35.7500	4.2667	82	35	11	2.46	2.93E-04	1.73E-03	121.50	187.20	220.55	31.26
7776	34.6500	-0.3670	64	72	2	9.6	1.16E-03	4.79E-03	123.69	188.44	221.33	34.62
6751	34.2500	-0.4830	64	31	17	3.6	4.22E-04	2.94E-03	121.58	188.33	222.23	29.96
6086	36.7000	-1.2670	11	47	26	9.42	1.11E-03	6.27E-03	123.31	189.71	223.43	32.08
7352	39.3633	-4.3830	32	34	15	4.38	5.16E-04	2.91E-03	123.35	189.77	223.50	32.10
4925			11	178	15	17.22	2.04E-03	9.86E-03	124.39	190.45	223.98	33.60
4751			21	70	120	6.72	7.88E-04	4.64E-03	123.44	190.17	224.05	31.78
5230	35.0833	1.0833	64	48	31	0.72	8.32E-05	6.35E-04	122.27	189.98	224.37	29.37
6553	36.0333	1.6833	82	43	30	6.18	7.32E-04	3.17E-03	125.65	191.71	225.25	34.60
7627	35.9333	-0.2670	76	85	104	5.4	6.18E-04	5.02E-03	122.75	191.12	225.84	28.98

Table C3.7 (13/17) Drawdown analyses

B/H no.	Longitude	Latitude	District code	Water level struck (m)	Rest (m)	Yield (m <sup>3</sup> /hr)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient	Calculated drawdown after 1 day (m)	Calculated drawdown after 1 year (m)	Calculated drawdown after 20 years (m)	Calculated drawdown from the pumping borehole after 1 year (m)	Calculated drawdown from the pumping borehole after 20 years (m)
4941	36.7000	-1.3330	11	156	95	10.2	1.19E-03	6.11E-03	125.63	192.70	226.75	4.93	33.45
5222	35.0167	-1.3833	84	39	12	1.56	1.78E-04	1.35E-03	123.83	192.41	227.23	2.57	29.75
6206	35.9000	-0.3600	76	144	35	12.06	1.38E-03	7.62E-03	127.24	195.63	230.35	4.55	33.29
5908			32	26	20	4.38	5.29E-04	9.68E-04	132.68	197.47	230.37	12.67	43.43
4687			21	130	42	6.72	7.55E-04	4.76E-03	128.03	197.68	233.04	3.78	32.39
4860	36.8333	-1.3000	11	130	37	21.3	2.44E-03	1.03E-02	130.21	198.52	233.20	6.38	36.27
4103	38.3000	-3.5000	35	66	41	6.84	7.80E-04	3.55E-03	129.93	198.55	233.39	5.87	35.58
5204			11	84	35	3.6	3.99E-04	3.05E-03	127.48	198.08	233.93	2.64	30.62
7433	36.9333	-1.1330	21	101	75	8.76	9.76E-04	6.71E-03	128.07	198.31	233.97	3.27	31.67
7765	34.5833	-0.4500	64	114	12	10.02	1.12E-03	6.12E-03	130.38	200.39	235.94	4.72	34.20
5041			11	152	8	12	1.33E-03	6.53E-03	132.77	203.38	239.22	5.50	35.73
6916	34.3500	-1.0330	64	19	2	1.5	1.63E-04	1.02E-03	132.46	204.47	241.03	3.96	33.58
4732			11	86	76	22.5	2.43E-03	1.59E-02	132.73	205.18	241.97	3.69	33.26
8247	34.2833	-1.1000	64	7	4	0.6	6.41E-05	5.04E-04	131.90	205.14	242.33	2.56	31.43
8460	38.0000	-1.5000	45	57	9	0.78	8.98E-05	6.02E-04	132.56	205.57	242.64	3.11	32.37
6098	35.2833	0.2167	77	22	23	4.02	4.39E-04	2.17E-03	134.67	206.33	242.71	5.53	36.18
8135	34.9167	-0.1670	62	141	18	3.6	3.84E-04	2.59E-03	134.01	207.37	244.62	3.54	33.31
4702			21	160	27	6.48	6.93E-04	3.94E-03	135.78	208.95	246.10	4.66	35.26
6000			46	106	68	3	3.18E-04	2.12E-03	135.00	208.82	246.30	3.64	33.66
8114	34.9833	-0.1330	62	70	7	12	1.29E-03	6.05E-03	137.46	210.25	247.21	6.00	37.39
6617	34.4000	-0.7670	64	34	19	1.2	1.27E-04	8.02E-04	135.89	209.83	247.37	4.00	34.36
5182			76	146	121	1.98	2.07E-04	1.47E-03	136.08	210.93	248.93	3.27	33.36
5272	37.2500	-1.5170	44	110	2	2.28	2.42E-04	1.20E-03	136.52	212.24	249.68	5.67	37.19
5848	35.6500	2.4667	82	24	6	6	6.28E-04	3.83E-03	137.85	212.61	250.57	4.28	35.17
4665	36.7167	-1.1330	21	100	36	24.72	2.51E-03	2.39E-02	136.28	213.34	252.47	1.44	30.70
5678			21	31	31	2.4	2.45E-04	2.09E-03	137.49	214.45	253.53	2.13	31.97
6036	37.4833	-2.0670	44	96	55	1.5	1.53E-04	1.11E-03	139.20	215.91	254.86	3.21	33.92
6323	35.4833	0.6833	72	86	4	9.9	1.01E-03	6.79E-03	140.16	216.86	255.80	3.72	34.87
4264	38.6167	-3.7500	35	12	7	5.28	5.49E-04	2.18E-03	144.24	219.49	257.71	7.52	40.72
4811	36.3333	-0.1170	24	116	27	9.06	9.24E-04	5.13E-03	142.69	219.42	258.38	5.06	37.28
6924	36.4333	-0.7330	76	110	95	7.74	7.89E-04	4.32E-03	142.94	219.70	258.68	5.17	37.47
6544			82	16	13	1.56	1.57E-04	1.01E-03	142.66	220.41	259.89	4.08	35.90
4597			21	230	114	5.64	5.69E-04	3.33E-03	143.56	221.12	260.50	4.73	37.01
5014			44	52	11	2.4	2.09E-04	1.82E-02	125.19	215.05	260.67	6.28	39.36
4734			44	94	48	2.7	2.75E-03	1.30E-02	144.98	221.80	260.81	3.31	35.12
5344			23	92	16	5.1	5.03E-04	3.65E-03	144.21	223.71	264.07	3.13	34.93
4450			44	66	12	9	8.81E-04	6.60E-03	144.61	224.54	265.13	3.37	35.38
4190	36.6833	-1.3500	11	136	24	2.88	2.82E-04	2.04E-03	146.04	224.95	266.53	4.75	37.85
5352			21	107	26	7.56	7.42E-04	4.41E-03	147.35	227.08	267.56	7.66	42.27
8121	34.9833	-0.0830	62	70	9	1.8	1.79E-03	7.28E-03	150.49	229.18	270.13	4.81	38.23
5342	36.7167	-1.3330	11	125	103	4.68	4.55E-04	2.70E-03	148.78	229.26	271.92	3.07	35.60
6052	36.6833	-1.2170	21	95	14	2.58	2.46E-04	1.86E-03	148.18	230.25	271.92	4.85	38.57
5043			44	50	20	1.38	1.33E-04	7.89E-04	150.09	231.28	272.50	4.65	36.57
4134	37.0833	-2.7000	73	54	19	2.52	2.38E-04	1.70E-03	150.55	233.40	275.47	3.58	36.85
7447	36.6333	-2.4330	73	82	65	1.62	1.53E-04	1.04E-03	152.15	235.55	277.89	3.92	37.67

Table C3.7 (14/17) Drawdown analyses

B/H no.	Longitude	Latitude	District code	Water level Struck (m)	Rest (m)	Yield (m <sup>3</sup> /hr)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient	Calculated drawdown after 1 day after 1 year (m)	Calculated drawdown of a pumping borehole after 20 years (m)	Calculated drawdown at 500 m from the pumping borehole after 1 year after 20 years (m)	Calculated drawdown at 500 m from the pumping borehole after 20 years (m)
6251	35.0333	1.5667	84	42	6	2.28	2.13E-04	1.57E-03	151.75	235.51	278.04	3.39
4910			21	60	58	6.72	6.34E-04	3.36E-03	154.90	237.84	279.96	5.84
7563	34.5633	-0.4500	64	53	32	0.268	2.64E-05	2.37E-04	151.80	237.17	280.51	2.03
7575	34.5833	-0.4500	64	62	13	7.998	7.32E-04	5.27E-03	155.28	240.79	284.21	3.64
7404	36.7167	-1.2170	21	204	44	7.2	6.59E-04	4.30E-03	156.66	242.15	285.56	4.38
8440	34.5333	3.7333	82	62	34	0.78	7.12E-05	4.55E-04	157.38	243.11	286.63	4.55
4214	35.9333	-0.3670	76	146	103	2.28	2.03E-04	1.40E-03	160.22	248.11	292.73	4.07
4755	36.6833	-1.2330	21	180	10	5.4	4.78E-04	2.87E-03	163.23	251.63	296.52	5.19
6759	34.2833	-0.5170	64	30	13	7.98	6.97E-04	4.48E-03	164.39	253.98	299.47	4.70
7398	36.9333	-1.4000	44	130	114	6.9	6.00E-04	3.80E-03	165.35	255.34	301.03	4.85
6755	34.2833	-0.5170	64	45	22	4.8	4.18E-04	2.53E-03	165.80	255.65	301.28	5.21
4477			31	40	4	7.32	6.38E-04	3.65E-03	166.51	256.29	301.80	5.67
4617			11	134	15	5.58	4.73E-04	3.31E-03	168.06	260.37	307.24	4.16
6100	37.2500	-1.5000	44	42	18	1.14	9.48E-05	9.04E-04	166.37	260.47	308.25	1.75
4835			64	30	26	9.06	7.56E-04	4.67E-03	172.71	266.48	314.10	5.26
6250	35.0333	1.5667	84	42	20	1.38	1.11E-04	1.08E-03	171.68	268.96	318.36	1.64
4831			78	210	116	5.46	4.47E-04	2.95E-03	174.96	270.54	319.07	4.79
4963			73	102	39	13.62	1.11E-03	6.66E-03	177.30	273.32	322.07	5.64
5326			23	148	28	10.5	8.37E-04	7.26E-03	175.14	273.30	323.14	2.62
6795	36.7167	-1.3330	11	104	20	22.728	1.78E-03	1.07E-02	184.47	284.39	335.12	5.85
8298			78	36		4.98	3.97E-04	1.64E-03	187.47	285.63	335.47	9.39
7778	34.6833	-0.4170	64	60		4.8	3.77E-04	1.96E-03	186.40	286.02	336.61	7.20
6081	36.6666	-1.3670	73	128	38	4.95	3.77E-04	3.50E-03	182.12	284.87	337.03	2.15
4274	38.3833	-3.5170	35	9	6	6	4.71E-04	2.33E-03	187.34	287.02	337.63	7.69
7454	36.8000	-1.6330	73	48	39	0.6	4.58E-05	3.68E-04	184.23	286.74	338.79	3.40
6557	35.5667	2.2667	82	36	43	1.2	9.14E-05	7.41E-04	184.47	287.21	339.37	3.33
7578	34.5167	-0.5000	64	48	6	0.6	4.58E-05	3.55E-04	184.85	287.36	339.41	3.71
4560	36.9000	-0.3500	25	120	42	7.74	5.93E-04	4.27E-03	185.45	287.58	339.44	4.34
6347	36.7500	-1.3500	11	190	95	4.26	3.27E-04	2.17E-03	186.50	288.44	340.21	5.06
6860			64	30	15	1.38	1.05E-04	7.53E-04	186.80	289.65	341.87	4.41
7782	34.5500	-0.5170	64	52	12	0.9	6.86E-05	4.75E-04	187.08	289.74	341.87	4.72
7786	34.3000	-0.1670	63	64	31	0.36	2.71E-05	2.36E-04	185.39	289.34	342.12	2.74
5171	36.0833	-1.2000	21	140	21	9	6.86E-04	3.86E-03	190.69	293.35	345.48	6.64
6056	36.9500	-0.6670	76	15	14	7.38	5.63E-04	3.04E-03	191.25	293.82	345.90	7.04
5667			76	90	35	4.32	3.22E-04	1.96E-03	193.61	298.59	351.89	6.03
6752	34.2333	-0.4670	64	42	17	7.98	5.99E-04	3.14E-03	194.89	299.14	352.07	7.45
7582	34.6167	-0.4170	64	29	6	0.85002	6.22E-05	4.93E-04	192.42	299.36	353.66	3.67
3706	36.9000	-0.3500	25	127	32	5.58	4.11E-04	2.59E-03	195.30	301.53	355.48	5.77
4540			45	88	86	3	2.20E-04	1.51E-03	194.61	301.32	355.50	4.98
5665	35.7500	4.2500	82	28	15	0.18	1.31E-05	9.70E-05	194.71	302.23	356.83	4.31
4775			64	148	6	10.56	7.73E-04	4.97E-03	196.15	303.04	357.32	5.61
4231	37.8333	-2.2670	44	78	17	9	6.69E-04	3.14E-03	198.77	304.04	357.49	8.68
5662	34.4833	2.5167	82	68	54	4.8	3.49E-04	2.17E-03	198.09	305.71	360.35	5.97
6095	36.2333	-0.2670	76	85	12	6.06	4.40E-04	2.74E-03	198.33	306.11	360.34	5.97
6295	37.0333	-0.9670	23	98	16	4.98	3.56E-04	2.92E-03	196.33	305.80	361.38	3.44



Table C3.7 (15/17) Drawdown analyses

B/H no.	Longitude	Latitude	District code	Water level Struck (m)	Rest (m)	Yield (m <sup>3</sup> /hr)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient	Calculated drawdown after 1 day (m)	Calculated drawdown after 1 year (m)	Calculated drawdown after 20 years (m)
4858	36.6167	-1.2170	21	170	90	18	1.32E-03	6.40E-03	200.90	307.60	361.78
4895			79	34	18	2.04	1.43E-04	1.10E-03	201.44	313.07	369.75
8258	35.1500	-0.5170	74	125	14	1.8	1.26E-04	9.84E-04	201.43	313.22	369.98
7155	34.3833	-0.6500	64	61	1	1.2	8.37E-05	6.78E-04	201.46	313.64	370.61
4586			42	130	128	12	8.32E-04	7.32E-03	201.09	313.95	371.26
4303	34.8833	-0.8330	61	57	48	10.2	7.08E-04	5.52E-03	203.17	315.90	373.14
5017	35.8500	-0.2170	76	64	21	5.04	3.51E-04	2.12E-03	207.36	319.72	376.77
5947			45	62	6	6.06	4.13E-04	3.72E-03	204.12	318.93	377.23
4891			61	40	24	6.06	4.13E-04	3.16E-03	207.29	322.11	380.41
3755	37.4500	-1.5670	44	47	36	1.08	7.37E-05	5.01E-04	209.32	323.99	382.21
3752	39.5167	0.6333	51	108	92	7.08	4.87E-04	2.33E-03	214.44	328.20	385.96
8066	34.9000	-0.1830	62	70	7	4.8	3.25E-04	1.73E-03	215.76	331.33	390.01
4611	36.7167	-1.0330	11	154	77	2.04	1.35E-04	9.48E-04	215.20	333.44	393.48
6878			22	73	14	6.6	4.39E-04	2.37E-03	219.35	336.99	396.72
6300	36.5167	-0.7670	76	166	132	4.5	2.94E-04	2.05E-03	218.12	337.89	398.71
3757	37.0000	-2.6000	73	50	39	4.5	2.98E-04	1.58E-03	220.68	338.84	398.84
7678	34.8500	3.7167	82	40	8	10.62	6.97E-04	4.19E-03	220.13	339.36	399.90
7426	36.7833	-0.1330	25	36	14	10.8	6.97E-04	5.11E-03	219.78	341.03	402.59
6354	36.6167	-1.2830	21	160	52	7.98	5.08E-04	3.60E-03	223.52	346.44	408.85
6049			21	192	79	3.48	2.21E-04	1.59E-03	223.74	346.96	409.53
4948	39.8500	-3.6170	31	19	18	6.78	4.25E-04	2.10E-03	234.63	359.46	422.84
5019			75	100	40	4.26	2.60E-04	1.99E-03	231.46	359.67	424.77
8261	35.4333	-0.7330	74	89	4	7.98	4.88E-04	3.51E-03	232.36	360.32	425.29
4737			75	184	87	3.6	2.22E-04	1.30E-03	234.84	361.74	426.17
5161	36.7000	-1.4000	73	43	24	9	5.49E-04	3.71E-03	234.30	362.58	427.71
4980	36.8500	-1.0330	21	45	26	5.4	3.29E-04	2.22E-03	234.61	363.05	428.26
4480			21	64	37	18.3	1.14E-03	4.85E-03	239.28	364.89	428.67
4507	36.7167	-1.2000	21	52	32	4.2	2.56E-04	1.61E-03	236.04	364.42	429.61
3658	39.4667	3.4667	53	43	17	1.26	7.65E-05	5.17E-04	235.40	364.28	429.72
8071	36.7667	-1.1670	21	172	56	4.62	2.77E-04	2.25E-03	234.30	364.81	431.08
6321	36.7667	-1.4000	73	193	26	6	3.64E-04	1.97E-03	240.44	369.42	434.91
3360	38.2333	-3.6500	35	128	49	10.92	6.66E-04	3.18E-03	241.89	370.19	435.34
8055	35.1833	-0.1670	89	11	11	12	7.32E-04	3.46E-03	242.07	370.35	435.48
4438			11	50	44	16.2	9.88E-04	4.45E-03	243.17	371.47	436.62
4206	35.9333	-0.3330	76	242	100	26.4	1.49E-03	7.31E-03	260.75	399.40	469.80
3832	37.0000	0.9000	79	17	8	4.08	2.26E-04	1.38E-03	260.44	401.71	473.44
6219	36.8333	-1.0500	21	132	24	3.3	1.81E-04	1.19E-03	261.24	403.90	476.34
5492			24	86	18	4.2	2.23E-04	1.70E-03	266.17	413.54	488.38
6002			44	50	22	3.96	2.05E-04	1.43E-03	275.27	426.42	503.18
5026			11	74	74	19.5	1.02E-03	5.31E-03	279.85	429.44	505.40
6331	35.3000	0.3667	77	66	5	2.7	1.38E-04	9.42E-04	279.37	432.46	510.20
8456			64	15	5	1.56	7.81E-05	6.40E-04	280.37	436.67	516.03
4763			21	232	38	13.62	6.71E-04	4.33E-03	291.34	450.18	530.82
6051	36.6866	-1.1170	21	40	9	9	4.45E-04	2.48E-03	294.22	452.40	532.84
4901			11	132	69	2.58	1.26E-04	7.03E-04	297.85	456.08	539.43
											10.50
											77.72
											76.79
											67.80
											63.99
											66.43
											70.18
											66.75
											65.72
											65.52
											63.21
											55.32
											58.48
											6.20
											4.21
											8.82
											10.35
											10.48
											11.11
											10.81
											8.07
											7.20
											5.55
											6.85
											10.79
											7.22
											4.92
											8.29
											10.38
											10.50

Table Cs.7 (16/17) Drawdown analyses

B/H no.	Longitude	Latitude	District code	Water level Struck (m)	Rest (m)	Yield (m <sup>3</sup> /hr)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient	Calculated drawdown after 1 day (m)	Calculated drawdown after 1 year (m)	Calculated drawdown after 20 years (m)
4621	36.8667	-1.1670	21	59	15	17.22	8.40E-04	4.24E-03	300.92	461.33	12.06
6264	37.0333	-0.7000	23	76	16	2.28	1.07E-04	6.05E-04	309.56	476.32	10.71
6024	34.3500	-0.9670	64	88	7	2.76	1.27E-04	9.10E-04	308.91	478.97	7.31
6974	36.5667	-0.8670	24	112	9	4.26	1.94E-04	1.66E-03	306.96	478.79	4.78
6289	36.6833	-1.1170	21	102	31	5.28	2.42E-04	1.63E-03	311.92	482.65	8.26
5397			73	198	26	8.82	4.01E-04	2.39E-03	318.02	490.13	10.22
5644	36.4333	4.4667	82	32	10	0.36	1.61E-05	1.12E-04	318.72	493.68	7.97
4572			32	36	23	56.82	2.52E-03	2.02E-02	317.15	493.58	5.89
3694	36.6667	-1.2000	21	116	33	7.74	3.49E-04	1.85E-03	324.11	497.65	12.22
5670			73	110	10	4.5	1.96E-04	1.46E-03	325.17	504.82	7.12
3657	39.4667	3.4667	53	46	1.08		4.71E-05	3.42E-04	325.53	504.96	7.50
5243	38.2167	-1.7670	43	24	15	3.72	1.63E-04	1.03E-03	328.21	506.79	9.65
7805	36.6833	0.7667	75	65	75	4.8	2.09E-04	1.49E-03	326.61	507.57	7.80
4121	36.3000	-0.2830	24	151	93	8.52	3.62E-04	3.17E-03	328.29	512.46	4.76
4556	35.0000	-0.2000	62	153	40	2.52	1.06E-04	9.86E-04	329.70	515.73	3.85
6322	36.7500	-1.4000	73	62	35	4.02	1.70E-04	9.95E-04	342.47	527.51	11.29
4999	36.8000	-2.2670	73	92	25	6.48	2.72E-04	1.75E-03	342.04	528.46	9.77
5042	36.7333	-1.3830	73	112	29	5.04	2.08E-04	1.17E-03	352.20	541.81	12.28
8474	36.8500		21	44	25	3.84	1.54E-04	1.19E-03	351.94	547.06	7.12
4866	36.9500	-1.1330	21	13	14	4.98	1.38E-04	1.38E-03	355.19	550.03	9.01
4251	37.6667	-0.2830	46	75	75	3.06	1.23E-04	8.13E-04	356.29	550.96	9.74
3856	36.9333	-2.4500	73	66	55	1.2	4.81E-05	3.25E-04	356.56	551.78	9.39
8902	35.8333	2.8667	82	58	32	15.6	6.51E-04	1.95E-03	368.34	555.85	24.78
5006			31	92	63	13.2	5.37E-04	2.66E-03	361.44	553.79	14.81
6224			11	94	23	2.94	1.17E-04	8.75E-04	355.76	552.38	7.72
4879	34.9500	-0.2330	62	149	15	6.54	2.56E-04	2.13E-03	358.07	557.97	6.04
7086			44	150	27	2.64	1.04E-04	7.15E-04	362.22	560.85	9.25
6309	36.7500	-1.1830	21	92	43	22.68	8.87E-04	5.19E-03	370.32	570.40	12.22
5255	37.3167	-1.2670	44	22	15	3	1.14E-04	8.24E-04	373.76	579.68	8.69
5499			44	50	17	2.7	1.02E-04	7.61E-04	374.85	581.98	8.18
8062	34.8333	-0.1500	62	98	18	1.8	4.58E-04	2.58E-03	380.79	585.81	13.25
6220	34.5500	-0.8830	64	10	1	16.44	6.59E-05	5.16E-04	385.04	598.77	7.56
4689			21	62	26		3.74E-03	3.74E-03	393.35	607.04	11.88
3813	37.7500	-2.2670	44	18	18	8.1	2.76E-04	2.95E-03	401.60	631.24	1.95
5406	37.1500	-0.7640	23	77	31	4.8	1.63E-04	1.54E-03	407.78	638.21	4.46
6555	35.5333	2.1667	82	206	24	2.46	8.14E-05	6.23E-04	426.93	663.41	8.82
3728	37.0667	0.6500	42	51	30	0.84	2.72E-05	2.37E-04	430.96	672.62	6.35
3835	36.8667	-2.3170	73	30	25	6.84	2.23E-04	1.30E-03	444.39	684.40	14.74
5368	36.7500	-1.3830	73	100	46	6.6	2.08E-04	1.62E-03	447.53	695.82	8.89
3697	39.3000	0.3667	51			4.74	1.46E-04	1.18E-03	456.30	710.34	8.30
4623	36.9000	-1.2830	11	93	12	24.72	7.54E-04	7.30E-03	452.93	709.48	4.43
8887			21	56	21	3.18	9.77E-05	7.04E-04	462.42	717.11	10.82
6212	36.6500	-1.2000	21	175	106	9	2.75E-04	2.04E-03	463.69	719.78	10.24
7313	38.2833	-1.7670	43	38	13	5.82	1.78E-04	1.16E-03	468.88	724.73	13.12
4666	36.7667	-1.3170	11	200	108	6.78	2.08E-04	1.26E-03	470.60	725.66	14.76

Table C3.7 (17/17) Drawdown analyses

B/H no.	Longitude	Latitude	District code	Water level Struck (m)	Rest (m)	Yield (m <sup>3</sup> /hr)	Transmis- sivity (m <sup>2</sup> /min)	Storage coefficient	Calculated drawdown of a pumping borehole after 1 day (m)	Calculated drawdown of a pumping borehole after 1 year (m)	Calculated drawdown at 500 m from the pumping borehole after 20 years (m)	Calculated drawdown at 500 m from the pumping borehole after 20 years (m)	
5226	34.9833	1.1833	84	33	26	0.66	1.97E-05	1.33E-04	478.86	741.02	874.13	12.62	118.99
6613	36.6500	-1.1870	21	150	90	26.4	7.84E-04	5.35E-03	480.82	744.32	878.12	12.44	119.14
4636	36.8333	-1.1000	21	109	5	31.8	9.02E-04	5.36E-03	509.88	785.75	925.83	16.45	130.96
4110	37.2000	-0.9000	23	94	3	3	8.32E-05	6.55E-04	508.04	790.19	923.45	2.84	121.02
2856	36.8000	1.7667	79	22	11	1.86	5.16E-05	3.71E-04	512.22	794.28	937.50	12.03	125.14
5545	36.9333	-1.4500	73	60	3	16.38	4.44E-04	3.19E-03	524.27	812.94	959.52	12.33	128.11
6216	36.6667	-1.4000	73	145	145	2.7	7.32E-05	4.80E-04	528.64	817.27	963.82	14.64	132.38
4417			79	66	31	10.26	2.81E-04	1.23E-03	542.87	828.58	973.65	25.59	149.99
5851	36.5167	2.6167	82	33	11	15.96	4.07E-04	3.07E-03	554.73	861.58	1017.38	11.82	133.75
4905			78	72	32	6.12	1.53E-04	1.24E-03	562.04	875.04	1033.97	10.15	132.79
7205	36.6333	-1.1670	21	223	166	5.1	1.25E-04	1.02E-03	572.91	892.17	1054.28	10.17	135.10
6217	36.7167	-1.2330	21	64	22	1.6	3.68E-05	3.13E-04	572.94	893.64	1056.48	8.94	133.28
7766	34.5667	-0.3830	64	46	3	3.6	8.45E-05	7.00E-04	597.39	930.76	1100.03	10.19	140.25
3833	36.6667	1.0600	79	38	12	2.64	6.18E-05	4.76E-04	603.12	937.39	1107.12	12.29	144.57
7429	36.7167	-1.2170	21	96	16	2.4	5.49E-05	4.32E-04	615.97	958.04	1131.73	11.95	146.76
6548	36.1167	1.3600	82	17	6	10.2	2.20E-04	1.46E-03	663.75	1026.54	1210.76	18.02	165.68
6332	36.7000	-1.1830	21	147	45	6.54	1.33E-05	9.98E-04	695.96	1080.73	1276.11	15.00	168.04
9170	37.0833	-0.2170	26	90	45	3.6	7.32E-05	5.30E-04	698.39	1083.22	1276.63	16.19	170.30
4513			79	40	8	6.84	1.37E-04	6.79E-04	734.09	1124.77	1323.14	30.07	197.10
4628			73	6	3	6.78	1.26E-04	1.04E-03	754.78	1175.84	1389.63	13.00	177.40
4520			11	154	87	10.92	1.81E-04	1.59E-03	841.28	1313.37	1553.08	12.08	194.16
4762			11	240	71	11.76	1.85E-04	1.56E-03	896.39	1367.81	1640.37	14.73	206.37
3674	36.3333	-0.6830	76	6	6	22.56	3.48E-04	3.21E-03	899.77	1407.06	1664.62	10.87	204.66
4198	37.0000	-2.0000	73	137	9	1.66	2.35E-05	1.68E-04	943.80	1463.24	1727.00	22.42	230.94
5411			21	98	83	42.9	6.54E-04	2.36E-03	992.46	1559.27	1766.38	56.96	286.24
4472	36.7000	-1.1830	21	200	67	10.08	1.41E-04	1.20E-03	999.87	1559.27	1843.31	15.82	232.92
6258	36.7833	-1.1830	21	147	28	8.16	1.11E-04	1.08E-03	1015.12	1590.37	1852.45	9.68	227.15
5902	38.1333	-1.4170	43	11	4	37.14	5.29E-04	9.68E-04	1125.07	1674.45	1953.40	107.43	368.23
8256	36.1667	-0.0500	62			1.98	2.64E-05	1.43E-04	1093.91	1680.78	1978.78	40.10	287.51
4882	36.7500	-1.3330	11	140	89	10.08	1.26E-04	6.38E-04	1173.99	1799.99	2117.85	46.85	313.61
6260	36.9667	-1.0000	21	164	73	16.32	1.83E-04	9.06E-04	1311.38	2009.21	2363.54	53.78	352.18
3761	36.5000	0.4333	76	128	115	5.16	5.46E-05	3.74E-04	1348.99	2088.49	2493.98	34.67	333.91
4690	36.7333	-1.3170	21	166	64	1.86	1.89E-05	1.94E-04	1351.97	2122.04	2513.06	9.35	297.50
6214	36.7167	-1.2000	21	30	23	2.7	2.75E-05	1.88E-04	1401.72	2169.99	2560.09	36.16	347.15
4422			31	206	67	9.96	9.16E-05	7.17E-04	1447.20	2246.73	2651.19	32.59	351.48
4693	36.6500	-1.1500	21	132	76	8.7	8.75E-05	4.91E-04	1540.20	2374.48	2798.10	48.80	394.36
5104			82	86	17	11.04	8.80E-05	6.33E-04	1782.82	2764.30	3262.75	41.84	435.45
6567			61	48	10	3.36	2.22E-05	1.80E-04	2126.66	3310.86	3912.23	36.35	502.38
8126	34.2833	-0.7500	64	17	4	12	7.89E-05	5.32E-04	2174.15	3364.26	3968.55	57.45	540.43
6635			21	50	11	46.42	2.88E-04	1.59E-03	2206.27	3530.33	4156.94	82.08	600.71
6223			11	122	49	11.52	5.37E-06	3.96E-04	3041.17	4719.83	5572.18	67.95	737.84
7218	36.9167	-1.1830	21	114	14	24.84	1.01E-04	7.55E-04	3482.09	5408.67	6383.75	75.66	841.65
4600	36.2600	-0.6670	76	101	45	9	3.15E-05	1.85E-04	4136.63	6372.34	7507.54	135.75	1066.64
6367	36.2667	0.5000	83	235	49	5.62	1.74E-05	1.55E-04	4417.81	6900.21	8160.68	60.68	1015.37



Table C3.9 (1/11) Potential and safe abstraction rates by location

Location	Abstraction of boreholes Potential		Abstraction of Safe		Total potential abstraction		Total safe abstraction	(Unit : m3/year)
	Potential	Safe	S/W	Safe	Total potential abstraction	Total safe abstraction		
211.0	155600	11919	16510	0	16510	155600	11919	16510
211.1	16802	1287	16802	0	16802	16802	1287	16802
211.2	271794	20819	271794	0	271794	271794	20819	271794
211.3	215642	16518	215642	0	215642	215642	16518	215642
211.4	91476	7007	91476	0	91476	91476	7007	91476
212.1	194304	14884	194304	0	194304	194304	14884	194304
212.2	331128	25364	331128	0	331128	331128	25364	331128
212.3	406714	31154	406714	0	406714	406714	31154	406714
212.4	182952	14014	182952	0	182952	182952	14014	182952
212.5	149183	11427	149183	0	149183	149183	11427	149183
213.1	401753	30774	401753	0	401753	401753	30774	401753
213.2	103532	7931	103532	0	103532	103532	7931	103532
213.3	1660137	127166	1660137	0	1660137	1660137	127166	1660137
213.4	511518	39182	511518	12088	523606	511518	51270	523606
214.1	677301	33043	677301	32456	709757	677301	65459	709757
214.2	1640315	125648	1640315	0	1640315	1640315	125648	1640315
214.3	149348	11440	149348	0	149348	149348	11440	149348
214.4	458554	35125	458554	0	458554	458554	35125	458554
215.1	108277	8294	108277	0	108277	108277	8294	108277
215.2	511584	39187	511584	0	511584	511584	39187	511584
215.3	29870	2288	29870	0	29870	29870	2288	29870
216.1	29870	2288	29870	0	29870	29870	2288	29870
216.2	424422	32511	424422	0	424422	424422	32511	424422
216.3	179207	13038	179207	0	179207	179207	13038	179207
216.4	39204	3003	39204	0	39204	39204	3003	39204
216.5	67207	5148	67207	0	67207	67207	5148	67207
216.6	119172	9129	119172	0	119172	119172	9129	119172
217.1	2749472	210610	2749472	0	2749472	2749472	210610	2749472
217.2	229862	17607	229862	0	229862	229862	17607	229862
217.3	350575	26854	350575	5847	356422	350575	32701	356422
221.1	364036	27885	364036	10662	374708	364036	38547	374708
221.2	319789	24494	319789	0	319789	319789	24494	319789
221.3	1479856	113357	1479856	0	1479856	1479856	113357	1479856
221.4	158663	12155	158663	0	158663	158663	12155	158663
221.5	367947	28185	367947	0	367947	367947	28185	367947
222.1	186685	14300	186685	17374	204059	186685	204059	204059
222.2	175484	13442	175484	0	175484	175484	13442	175484
222.3	138147	10502	138147	489	138636	138147	11071	138636
222.4	2336117	178047	2336117	0	2336117	2336117	178047	2336117
223.1	827820	63411	827820	0	827820	827820	63411	827820
223.2	197626	15138	197626	0	197626	197626	15138	197626
223.3	198846	15232	198846	0	198846	198846	15232	198846
231.1	110144	8437	110144	0	110144	110144	8437	110144
231.2	468630	81455	468630	0	468630	468630	81455	468630
231.3	132889	10179	132889	0	132889	132889	10179	132889
231.4	695778	53297	695778	0	695778	695778	53297	695778
231.5	1017912	77972	1017912	0	1017912	1017912	77972	1017912
232.1	136403	10448	136403	0	136403	136403	10448	136403
232.2	128813	9867	128813	0	128813	128813	9867	128813
232.3	373760	28630	373760	0	373760	373760	28630	373760
232.4	46671	3575	46671	1017	47688	46671	4592	47688
232.5	272378	20864	272378	19262	291640	272378	291640	291640
232.6	154049	11869	154049	0	154049	154049	11869	154049
233.1	876686	438343	876686	0	876686	876686	438343	876686
233.2	87742	6721	87742	4246	91988	87742	10967	91988
233.3	128813	9867	128813	1696	130509	128813	11563	130509
233.4	285629	21879	285629	0	285629	285629	21879	285629
233.5	214688	16445	214688	0	214688	214688	16445	214688
234.1	87742	6721	87742	0	87742	87742	6721	87742
234.2	188552	14443	188552	5770	194322	188552	194322	194322
234.3	140014	10725	140014	18972	158986	140014	29697	158986
234.4	24265	1859	24265	2650	27115	24265	4709	27115
234.5	343392	26304	343392	55608	399000	343392	81912	399000
235.1	1205220	92320	1205220	0	1205220	1205220	92320	1205220
235.2	540254	41613	540254	174171	714425	540254	714425	714425
235.3	1373148	106183	1373148	11636	1384784	1373148	116819	1384784
241.1	602688	46166	602688	0	602688	602688	46166	602688
241.2	168017	12870	168017	0	168017	168017	12870	168017
241.3	238957	18304	238957	0	238957	238957	18304	238957
241.4	953366	73181	953366	16	953382	953366	73197	953382
241.5	405880	31090	405880	0	405880	405880	31090	405880
242.1	375238	28743	375238	32254	407492	375238	407492	407492
242.2	858753	65780	858753	18063	876816	858753	876816	876816
242.3	421909	32318	421909	0	421909	421909	32318	421909
242.4	27242	21237	27242	0	27242	27242	21237	27242
243.1	132547	10153	132547	0	132547	132547	10153	132547
243.2	479781	36751	479781	11293	491074	479781	48044	491074
243.3	468580	35893	468580	0	468580	468580	35893	468580
243.4	678502	51973	678502	0	678502	678502	51973	678502
244.1	158683	12155	158683	10363	169046	158683	22538	169046
244.2	715400	54800	715400	0	715400	715400	54800	715400
245.1	1998448	153081	1998448	9309	2007757	1998448	162390	2007757
245.2	1001685	76729	1001685	0	1001685	1001685	76729	1001685
245.3	417560	31985	417560	0	417560	417560	31985	417560
245.4	192286	14729	192286	0	192286	192286	14729	192286
245.5	1474483	294897	1474483	883	1475366	1474483	294897	1475366
251.1	3048272	233498	3048272	1360	3049632	3048272	233498	3049632
251.2	630966	48334	630966	0	630966	630966	48334	630966

Table C3.9 (2/11) Potential and safe abstraction rates by location

Location	(Unit : m3/year)										
	Abstraction of boreholes Potential	Abstraction of S/W Safe	Total potential abstraction	Total safe abstraction							
252.1	621662	47619	0	621662	47619	314.2	203487	15957	130157	333644	145744
252.2	225889	17303	0	225889	17303	314.3	263226	20163	128221	392047	148964
252.3	220269	16874	0	220269	16874	314.4	634288	48586	78907	713195	127493
252.4	1731811	132657	0	1731811	132657	314.5	2375121	181934	476632	2851753	658566
252.5	235224	18018	0	235224	18018	314.6	1464872	112194	262768	1747440	394962
253.1	35470	4441	0	35470	4441	314.7	1050816	80477	121524	1172140	202001
253.2	52272	4004	0	52272	4004	314.8	143748	11011	107747	251495	118758
253.3	78408	6006	5153	83561	11159	314.9	563324	431407	640349	6273473	1071846
253.4	156366	11978	29756	186122	41734	314.A	425843	218275	643918	643918	250879
253.5	132547	10153	25594	158141	35747	314.B	863798	661655	417244	9055042	1078899
254.1	222156	17017	0	222156	17017	314.C	18501762	1417235	3547987	22048849	4964322
254.2	95210	7293	4000	99210	11293	321.1	504050	38610	114398	618448	152008
254.3	112011	8580	0	112011	8580	321.2	130378	9987	42813	173191	52600
254.4	51042	3910	0	51042	3910	321.3	265136	20309	27189	292325	47498
254.5	78408	6006	0	78408	6006	321.4	177842	136183	78520	1856362	244703
254.6	438000	33551	0	438000	33551	322.1	1479287	113313	167910	1647197	281223
255.1	143748	11011	0	143748	11011	322.2	1548285	118399	149311	1697596	267910
255.2	125079	9581	0	125079	9581	322.3	732488	56109	87278	819766	143387
255.3	308164	23432	0	308164	23432	322.4	533150	49839	91570	624720	132409
255.4	292837	22431	0	292837	22431	322.5	1928201	147700	195156	2123257	342856
256.1	69074	5291	0	69074	5291	323.1	1264788	96883	138167	1398955	231050
256.2	115745	8666	0	115745	8666	323.2	658533	50290	102224	756757	150514
256.3	178120	13644	0	178120	13644	323.3	1020410	78163	126295	1146703	204458
256.4	748104	57305	0	748104	57305	323.4	941408	72112	85576	1026984	157688
257	200896	15389	0	200896	15389	323.5	2428776	186044	1233570	3662346	1419614
311.1	182952	14014	90578	273366	104392	323.6	4194288	321282	718122	4912410	1030404
311.2	2523814	19324	273366	2797180	468690	323.7	2018988	154884	1054783	3072851	1209367
311.3	500317	38324	251695	782012	290019	323.8	4863017	372407	780361	5643378	1152868
311.4	577372	44227	107635	695007	151862	323.9	1713806	131278	254342	1968348	385820
311.5	1824182	139732	103752	1927934	243484	324.1	1164029	89165	119279	1283308	208444
311.6	119479	9132	58518	177997	67670	324.2	503255	38557	43956	547311	82513
311.7	105999	80890	60335	1116334	141225	324.3	959512	120131	130866	1090378	250997
311.8	130680	10010	64636	195316	74846	324.4	46255	3551	21265	67620	24816
311.9	123107	9430	27669	150776	37099	324.5	1187253	503627	193221	1390474	786848
312.1	7410960	567660	1175407	8586367	1743087	324.6	25096213	1922370	1026121	26123334	2348491
312.2	382705	29315	189193	571898	218508	324.7	4669320	356981	316094	4976414	673075
312.3	2547291	195122	355337	2992628	559459	324.8	1232653	94421	185946	1418590	280367
312.4	184818	14157	91717	196535	7532943	324.8	7532943	577023	1208222	8741165	1785245
312.5	280028	21450	138863	418891	169313	332.1	8077421	618730	792714	8870135	1411444
312.6	1246576	95488	635712	1822288	701200	332.2	6609842	506299	510411	7120053	1016710
313.1	259296	19862	101897	361193	121759	332.1	7307988	559723	1027536	8334624	1587259
313.2	1761801	134954	286445	2048246	421399	333.2	27266	2089	4091	32257	7080
313.3	196020	15015	97009	293029	112024	333.3	406230	31117	37182	443412	68290
313.4	373234	28500	76509	449743	105099	333.4	696476	59405	59405	755683	112755
313.5	159870	12246	66970	226840	79216	334.1	2572524	197055	1194229	3766753	1391284
314.1	8700942	667151	1385532	10995074	2052683	334.2	7826876	980150	739607	8568283	1719757

Table C3.9 (3/11) Potential and safe abstraction rates by location

Location	(Unit : m3/year)				Location	(Unit : m3/year)					
	Abstraction of boreholes Potential	Abstraction of boreholes Safe	Total potential abstraction	Total safe abstraction		Abstraction of boreholes Potential	Abstraction of boreholes Safe	Total potential abstraction	Total safe abstraction		
335.1	54073	4142	13688	67761	17830	413.2	296897	22880	58405	357162	81285
335.2	48932	3825	36039	85971	39864	413.3	393906	30173	197890	501796	228063
335.3	938605	71897	91435	1030040	163332	413.4	769144	58916	386998	1156142	485914
340	1839600	140913	64595	1994105	205418	413.5	344151	26362	181920	526071	208282
351.1	12137798	929755	355416	1285171	285171	413.6	571237	43798	215770	787036	259537
351.2	15104956	1157040	2507645	17812601	3664985	413.7	33603	2574	0	33603	2574
351.3	19896137	1524044	3088120	22984257	4612164	421.1	10653795	3551285	430186	11082981	3981451
352.1	37880357	2909311	1914177	40833043	5861797	421.2	939403	71958	1055872	1995075	1127630
352.2	1544563	118314	1914177	3458740	2032491	422.1	24407813	1869638	2062843	26470456	3922281
352.3	3783736	289834	1909079	5652815	2198913	422.2	8020656	614362	775060	8795716	1394442
352.4	1524240	118757	107231	1631471	223988	422.3	6728030	515367	1855878	8583908	2371245
353.1	204603	15673	93949	209952	111022	422.4	4237757	324612	2186539	6424298	2511151
353.2	5175143	396416	497204	5672347	893620	422.5	6160032	471858	2968321	9028353	3340179
353.3	2026306	155215	439384	2465689	594599	423.1	6135066	469846	1798871	7933937	2268817
354.1	4913384	376373	661594	5575078	1037967	423.2	5988865	458747	2959881	8948546	3418428
354.2	1360936	104248	680468	2041404	784716	423.3	41090941	3147566	7601345	48802286	10748911
354.3	4247091	325927	2354155	6601246	2679482	431.1	1290502	98859	278876	1569458	377736
354.4	6593726	505079	3479036	10072762	3984115	431.2	479781	36751	243590	723471	280441
354.5	4960220	379954	2787337	7747586	3167311	431.3	704868	53994	161862	866750	215856
354.6	8899557	681706	3295531	12195088	3977237	431.4	468580	35893	238226	706906	274219
354.7	14636882	1121323	2075451	16714133	3196774	431.5	885810	67792	256383	1141393	324175
354.8	2034197	156819	253525	2287722	409344	431.6	85594	77063	189957	1064551	256120
354.9	18612328	1425720	10536884	29140412	11962604	431.7	1324595	101440	508876	1833071	619125
355.1	843296	120471	378968	1222264	498439	431.8	802747	61490	408934	1211581	479324
355.2	1205707	92957	337254	1342931	429581	432.1	662733	50765	381475	1044208	42240
355.3	1015372	77777	202420	1217792	280197	432.2	4769810	365367	2596362	7366192	2067749
355.4	285520	21879	180769	466398	202648	432.3	6216972	476250	574291	6791263	1050511
355.5	1952341	149549	238156	2190507	307715	432.4	3829676	293353	819980	4649656	1113333
355.6	182296546	13060915	10847612	193144158	24811527	432.5	5252876	402370	794728	6047604	1197096
356.2	1321732	101245	727895	2049627	829140	433.1	2895572	221801	439734	3935306	661535
356.3	1222242	93624	675846	1898088	769470	433.2	9129799	699342	305246	9435035	1004588
356.4	3650292	279612	1024421	4674713	1304933	433.3	4675010	358106	728601	5404611	1087797
356.5	4255608	325980	807898	5153506	1222878	433.4	4584663	351185	368873	4953536	720058
411.1	169884	13013	0	169884	13013	433.5	1774426	135921	601052	2375478	736973
411.2	642721	49232	0	642721	49232	433.6	1306797	100101	686430	1993227	786531
411.3	63473	4862	0	63473	4862	433.7	6427578	492352	3392392	9219966	3884744
411.4	374490	28686	14624	399114	43310	434.1	836273	64089	405796	1242069	469855
411.5	249660	13257	0	249660	13257	434.2	1937333	148400	218215	2155548	366615
411.6	128813	9867	0	128813	9867	434.3	3394711	260035	448271	3842982	708306
411.7	834615	63932	0	834615	63932	434.4	995033	76250	505716	1500740	581936
411.8	100419	14586	7404	107823	21990	434.5	690736	52010	351350	1042086	404260
412.1	244558	18733	121394	365892	140067	435.1	10409800	797391	1472858	11882658	2270249
412.2	1062734	81405	235792	1298516	317187	435.2	1222579	93666	623385	1046174	171061
412.3	3051400	233737	150464	3201664	384201	435.3	5360536	410617	520678	5881154	931235
412.4	654698	164383	164383	1808066	214348	435.4	1920250	147091	373154	2293404	520245
413.1	532001	40751	1207	533208	41958	435.5	6068490	464846	1221532	7290022	1686378

Table C3.9 (4/11) Potential and safe abstraction rates by location.

Location	Abstraction of boreholes		Abstraction of		Total potential		Total safe		(Unit : m <sup>3</sup> /year)		
	Potential	Safe	S/W	Safe	abstraction	abstraction	abstraction	abstraction			
435.6	427504	327472	2285572	6560666	2613044	452.1	12130848	929223	733041	12863889	1662264
436	30617748	2345319	5485949	36103697	7831268	482.2	24515249	1877868	3680897	26196146	5568765
437.1	118422	16731	106369	324791	123100	483.1	14210272	1085507	2165716	16375988	3254223
437.2	2153715	86375	50437	1204152	138112	483.2	56142256	4300407	4916022	61060278	9216519
437.3	757302	58009	175923	932225	233932	484.1	1900457	145575	0	1900457	145575
442.1	838098	64198	115480	93578	179678	484.2	1129446	86516	0	1129446	86516
442.2	395848	30322	55359	451207	85881	484.3	1006234	77078	0	1006234	77078
442.3	492849	37752	137581	630430	175333	485.1	21428186	1641399	612509	22040695	2253908
443.1	291229	22308	142590	433819	164808	485.2	7497684	574323	1684885	9182560	2259208
443.2	929144	71172	169490	1098634	240862	486.1	102677	7865	46751	149428	54616
443.3	305782	23423	140855	446637	164278	486.2	2153083	164926	937165	3990248	1102991
443.4	918106	70327	182466	1100572	252793	486.3	725367	55563	1048067	1774334	1104530
443.5	687134	52634	145836	832970	198470	486.4	2561424	196205	1530	2562954	197735
443.6	1034322	79229	181915	1216237	261144	486.5	618711	47393	4861	623572	52254
443.7	1173790	89912	370457	1544247	460369	486.6	326719	26027	0	326719	26027
444.1	974494	74646	116421	1090915	191967	486.7	104644	6998	0	104644	6998
444.2	1583059	121269	138733	1721762	259993	486.8	466580	35893	53864	522444	89757
444.3	143748	11011	70303	214051	81314	486.9	2748538	210538	448	2748538	210996
444.4	438711	33605	215171	639882	248776	487.2	268827	20592	0	268827	20592
445.1	248291	19019	106946	365237	125965	487.4	265093	20306	0	265093	20306
445.2	1013999	77672	53163	1067162	130335	487.5	262025	19305	2231	254246	38197
445.3	1631112	124943	101750	1732865	226696	487.6	472549	36197	0	472549	36197
446.1	1054772	80796	349124	1403896	429920	487.7	261359	20020	27038	288597	47058
446.2	429376	32890	172077	601453	204867	487.8	119479	9152	207	119686	9359
446.3	489116	37466	214599	703715	252065	487.9	375968	28799	24801	400829	53660
446.4	2431372	186243	234849	2718021	470992	488.0	168683	12159	30863	189326	42799
446.5	12691040	972134	977676	13668716	1949810	488.1	731129	56004	0	731129	56004
447.1	605807	46405	175414	781221	221810	488.2	840960	64418	8568	849528	72986
447.2	317385	24310	156229	473594	180539	488.3	3022846	231550	56045	3078993	287595
447.3	209088	16016	102290	317378	118306	488.4	69074	5291	0	69074	5291
447.4	456476	34905	120901	576577	159096	488.5	347235	26598	14354	361589	40952
447.5	175484	13442	85289	260773	98731	488.6	235224	18018	109877	345101	127895
447.6	1321650	101238	160517	1482167	261755	488.7	2255875	172899	87928	2343793	269628
447.7	649665	49764	300744	950409	350308	489.1	315488	24167	28237	343755	52424
447.8	4953551	379442	294990	5248451	674342	489.2	154949	11869	13757	168706	25626
448.1	807599	61862	249195	1056794	311057	489.3	179218	13728	32709	211927	46437
448.2	5180080	396794	856760	6038840	1253554	489.4	102677	7895	0	102677	7895
448.3	1980835	151732	416788	2397623	568520	489.5	312266	23915	0	312266	23915
448.4	924667	70829	205631	16110996	1960198	489.6	313631	24024	0	313631	24024
449.1	15323693	1173795	786403	16110996	1960198	489.7	705671	54054	0	705671	54054
449.2	2449211	187610	414492	2863703	602102	489.8	343591	26312	0	343591	26312
449.3	1702570	130417	713647	2416217	844964	489.9	869954	66698	375689	1245643	442327
449.4	1586825	121551	548033	2134858	669384	490.1	638464	48906	293244	931708	342150
451.1	21071174	1614052	5510010	26581192	7124070	486.2	1064093	150450	327363	2291456	477813
451.2	13267727	1016308	13610604	16679331	4426812	486.3	314046	24056	182795	496841	206851
451.3	86702325	6641398	2301741	89004066	8943139	486.4					



Table C3.9 (5/11) Potential and safe abstraction rates by location

Location	Abstraction of boreholes		Abstraction of		Total potential		Total safe		Location	Abstraction of boreholes		Abstraction of		Total potential		Total safe	
	Potential	Safe	S/W	Safe	abstraction	abstraction	abstraction	abstraction		Potential	Safe	S/W	Safe	abstraction	abstraction	abstraction	abstraction
467.1	1875279	143646	506047	0	2387326	649693	532.2	3530220	270415	1733129	5203349	2003544					
467.2	630087	48265	0	0	630087	48265	532.3	19622166	1502058	4084654	23676820	5557712					
467.3	2162143	165620	33460	0	2195612	199089	532.4	257894	19755	131972	309866	151727					
468.1	4101315	314161	0	0	4101315	314161	533.1	3776644	280291	1854819	5631463	2144110					
468.2	4223722	323537	41	41	4223763	323578	533.2	4695936	359218	2303163	6992690	2662381					
468.3	3192944	244580	0	0	3192944	244580	534	11630990	892398	7019250	18689349	7911648					
469	4963377	380195	25233	0	4998610	405428	535.1	3597426	275563	2061682	5659088	2337225					
511.1	3084880	236302	710829	0	3795700	947131	535.2	22026144	2757673	3618565	25644707	6376236					
511.2	1668967	127843	857369	0	2526336	985212	535.3	9144214	700447	2661005	11805219	3361452					
511.3	4409726	337765	1401655	0	5811381	1739440	535.4	2722812	208567	1852232	4575044	2060799					
512.1	9178400	703065	1660346	0	10838746	2363411	536.1	9819434	752160	3629873	13449307	4382042					
512.2	5019069	394530	2442634	0	7462603	2827084	536.2	8811003	674923	3034488	12745491	4609411					
513.1	2734940	209496	1388865	0	4123905	1598361	537.1	4443111	340342	2183086	6626197	2323428					
513.2	2588961	1989290	2764984	0	28728945	4744283	537.2	1965797	150580	965509	2931306	1116089					
513.3	2936503	2249428	1902307	0	31279210	4158735	537.3	7890113	61204	392046	1191068	453249					
513.4	2933003	155728	1018432	0	3051435	1174160	611.1	555034	42516	59406	614440	101922					
514.1	22418748	1717276	2123890	0	24540647	3841175	611.2	162416	12441	78677	241093	91116					
514.2	1775376	135094	864211	0	2639560	1000205	611.3	410073	31412	43166	453238	74577					
515.1	3937194	301589	1916152	0	5853346	2217741	611.4	313760	23830	57565	431325	86195					
515.2	1366537	104677	664941	0	2034478	796618	611.5	171751	13156	62292	255043	96448					
516.3	2283323	174903	821262	0	3104585	996165	611.6	194513	14872	94059	268212	108031					
516.4	1661499	127271	808677	0	2470076	935848	612.1	119479	9152	57435	178914	66587					
516	13995790	1072078	6817702	0	20807501	7883780	612.2	784822	195801	195801	324223	122532					
517.1	6312456	483534	3495009	0	9807465	3978943	612.3	246425	18976	126608	360033	141484					
517.2	4355122	348922	2408839	0	6963961	2757761	612.4	156683	12155	83144	241827	95299					
618	34240621	2622892	7137352	0	41377973	9760184	613.1	175200	13420	89761	264361	103181					
519.1	7212133	552449	1192165	0	8402298	1744614	613.2	691792	52991	132632	624424	195623					
519.2	2059223	187736	412476	0	2471698	570271	614.1	446760	34222	40607	487367	74829					
521.1	360303	27599	162345	0	522648	189944	614.2	146766	11166	64371	210137	76537					
521.2	196020	15015	94467	0	200477	109472	614.3	119479	9162	58137	177616	67289					
521.3	492849	37752	236307	0	731156	276059	614.4	822039	62068	83199	905237	146167					
522.1	6119502	468754	3055347	0	9176849	3524101	615	42938	3289	20977	63915	24266					
522.2	3688902	262570	1785163	0	5474065	2067733	616.1	93343	7150	44970	138313	52120					
523.1	8580058	687232	4144583	0	12724641	4801815	616.2	326678	27015	56605	499283	83620					
523.2	13867488	1698649	1311485	0	14878973	3010134	616.3	169549	12298	76962	237511	89260					
524.1	8526483	676100	4270280	0	13096771	4946397	616.4	645086	49414	18508	733674	139002					
524.2	948361	72644	459173	0	1407534	531617	617.1	640145	41375	101805	614950	143180					
524.3	1266392	98240	13712	0	1270104	109952	617.2	104544	8008	49827	154371	57836					
525.1	4276094	327472	2067334	0	6342428	2394406	617.3	798386	9958	68912	867298	168870					
525.2	1611094	123410	787488	0	2398982	190378	617.4	180378	13817	73547	25925	87364					
526.1	7043636	539543	3405700	0	10450338	3946243	617.5	333360	34883	48516	362876	67999					
526.2	3988977	237382	1494409	0	4593386	1736791	617.6	1076087	82428	106905	1182902	169333					
531.2	21555000	1631120	5340671	0	26894761	6591791	621.1	162416	12441	78677	241093	91116					
531.2	6120062	468666	457184	0	10693146	5041050	621.2	126170	9682	110526	1378696	297208					
531.3	17623294	1340944	4936438	0	22559732	6886302	621.3	171751	13156	94411	266162	107567					
532.1	11694950	698833	3515127	0	15210077	4410960	622.1	565008	43280	66137	631145	109417					

Table C3.9 (6/11) Potential and safe abstraction rates by location

Location	(Unit : m <sup>3</sup> /year)				(Unit : m <sup>3</sup> /year)					
	Potential	Abstraction of boreholes	Abstraction of S/W	Total safe abstraction	Potential	Abstraction of boreholes	Abstraction of S/W	Total safe abstraction		
622.2	323758	24800	32872	356630	57672	641.4	136280	69484	205684	79843
622.3	319565	24479	28663	348228	53142	641.5	257826	120828	378454	140562
622.4	9180	119837	32319	152156	41499	642.1	281895	21593	435498	175196
622.5	1750248	134069	141707	1891955	278776	642.2	69074	5291	102837	39054
623.1	425643	32604	412991	838634	445595	642.3	133935	10190	156652	33807
623.2	477914	36608	382564	860476	419172	642.4	238957	74647	313604	92951
624.1	283298	21701	139395	422393	160736	642.5	130680	10010	134136	19466
624.2	609539	53585	151568	851107	203153	642.6	309898	23758	429518	143558
625.1	489359	37485	33506	522865	70991	642.7	630996	501019	1132015	549353
625.2	359575	26654	69156	430731	116010	643.1	680565	52131	62144	742699
625.3	1480946	113440	255308	1736254	368748	643.2	210954	102190	313144	118349
625.4	48098	48098	143625	771542	191723	643.3	184813	14157	46988	61145
626.1	332300	25454	316977	649277	342431	643.4	339187	25982	20750	359937
626.2	867240	66431	26224	893464	92655	643.5	276294	21164	116783	393077
626.3	350546	26852	87218	437764	114070	643.6	287495	22022	33913	321408
631.1	168150	12727	0	166150	12727	643.7	1089058	83422	26128	1115166
631.2	91476	7007	33487	124963	40494	644.1	296830	22737	146123	442953
631.3	108277	8294	19793	128060	28077	644.2	711312	54486	182442	803754
631.4	160549	12298	79590	240139	91888	644.3	895272	68578	191966	1087238
631.5	259646	19889	50371	310017	70260	645.1	1367129	104722	269877	1636806
631.6	85901	25500	38588	123589	64088	645.2	662733	50765	134375	797108
632.1	197886	15198	102735	306621	117893	645.3	1645499	126045	223460	1868959
632.2	119136	9126	44676	163812	53802	646.1	79583	6096	62973	142358
632.3	1071757	82097	122424	1194181	204521	646.2	145815	11154	71111	216726
632.4	203487	15587	94758	298245	41066	646.3	536112	41066	19923	596035
632.5	210954	16159	131168	342122	147327	646.4	3072716	235370	15680	3088396
632.6	84008	6435	43481	127489	49916	646.5	223701	17135	42888	266589
632.7	39620	3035	11324	50944	14359	646.6	84498	6473	0	84498
633.1	1256876	96246	113774	1370250	210020	646.7	571970	71811	54018	625986
633.2	177351	13585	82900	260251	98485	646.8	784078	261959	1295	125629
633.3	156316	12012	74316	231132	83328	647.1	401700	37885	58767	262654
633.4	372987	28502	87376	489463	115878	647.2	191464	14666	74026	96432
634.1	227756	17446	106024	339780	123470	647.3	194464	14666	74026	88692
634.2	78256	5994	53430	131706	59444	647.4	253992	19448	102888	118761
634.3	244558	18733	116896	361454	135629	647.5	246291	19019	124428	143876
634.4	422185	32339	112746	534931	145085	648.1	177351	13585	122101	141120
634.5	186685	14300	87819	274504	102119	648.2	113878	8723	139409	316850
634.6	194153	14872	139902	332245	153964	648.3	419917	167847	12804	126582
635.1	102877	7865	48043	150720	55908	648.4	192266	14729	146170	565787
635.2	1331526	101994	143055	1474575	245049	648.5	95210	7293	42939	314017
635.3	261350	20020	125322	386681	145342	649.1	59739	4376	42939	50232
635.4	145182	11121	96410	241592	107531	649.2	443934	33998	59076	33776
635.5	143748	11011	87820	211568	78831	649.3	121345	9295	59076	93074
641.1	255695	19586	37274	292969	56860	649.4	179218	13728	58248	68543
641.2	197886	15158	54297	232183	69455	649.5	63473	4862	88292	102020
641.3	882920	151760	48103	731023	199863	649.6	154949	11669	76699	35575
										86568

Table C3.9 (7/11) Potential and safe abstraction rates by location

Location	Abstraction of boreholes		Abstraction of		Location	Abstraction of boreholes		Abstraction of		Location	Abstraction of boreholes		Abstraction of	
	Potential	Safe	S/W	Safe		Potential	Safe	S/W	Safe		Potential	Safe	S/W	Safe
649.7	43683	3346	69351	113034	72697	459376	32890	0	420376	32890	0	420376	32890	
649.8	458060	35087	57745	515605	92832	582458	44616	0	582458	44616	0	582458	44616	
711.1	6776736	519098	255079	7020815	772177	905424	89355	22497	927921	91852	22497	927921	91852	
711.2	20905427	1601356	1012850	21918286	2614215	828883	63492	3462	823345	66954	3462	823345	66954	
711.3	6419445	481729	3362690	9782335	3854619	616062	47190	77160	682222	124350	77160	682222	124350	
712.1	296830	22737	0	296830	22737	3857151	296224	237795	4104946	534019	237795	4104946	534019	
712.2	10923799	836763	85086	10988885	901849	3574869	273836	709285	4284174	963121	709285	4284174	963121	
712.3	3124949	239371	183466	3268415	382837	4196133	314530	392020	4498153	706350	392020	4498153	706350	
713.1	1231053	101959	162097	1493150	264058	500317	38324	208451	708768	246775	208451	708768	246775	
713.2	410708	31460	209754	620462	242124	2839700	217521	384071	3223771	601592	384071	3223771	601592	
713.3	1209721	92665	619634	1829355	712299	456970	35004	322209	779179	357213	322209	779179	357213	
713.4	8739648	669457	1295676	10023324	1955133	5314374	407081	100070	5414444	507151	100070	5414444	507151	
713.5	2992566	229231	1805946	4798512	2035177	7867064	682617	232237	8089301	834854	232237	8089301	834854	
713.6	2720005	208352	821864	3541869	1030216	6403578	490514	29347	6442925	529851	29347	6442925	529851	
713.7	2855059	218698	511939	3368998	730637	293066	22451	12784	303860	35235	12784	303860	35235	
713.8	569867	43652	342099	911966	385751	1834422	140517	15506	1034422	110871	15506	1034422	110871	
713.9	1528953	117118	694925	2223878	812043	1244971	95365	15506	1250477	110871	15506	1250477	110871	
713.A	1863120	142715	49856	1912976	192571	380184	29122	0	380184	29122	0	380184	29122	
714.1	2731206	209210	661266	3392472	870476	72825	5578	0	72825	5578	0	72825	5578	
714.2	11284496	872052	268790	11652286	1140842	109810	10700	0	130810	10700	0	130810	10700	
721.1	1377773	105537	113209	1489982	218746	1879173	127935	0	1670173	127935	0	1670173	127935	
721.2	1904719	14586	33208	233627	47794	954762	73135	0	954762	73135	0	954762	73135	
721.3	319232	24453	45066	363298	69519	687002	52624	1427	688429	54051	1427	688429	54051	
721.4	1282866	98267	128752	1421608	237019	326699	25025	0	326699	25025	0	326699	25025	
721.5	547641	41949	122917	670658	164866	177351	13585	0	177351	13585	0	177351	13585	
721.6	219321	16800	24800	244121	41600	194153	14872	0	194153	14872	0	194153	14872	
722.1	289362	22165	1671	291039	23836	953649	73050	0	953649	73050	0	953649	73050	
722.2	958661	73435	57290	1015971	130725	563790	43186	0	563790	43186	0	563790	43186	
722.3	339767	26026	36240	376007	62266	737802	56516	0	737802	56516	0	737802	56516	
723.1	423400	32432	31009	454409	63441	441504	33810	0	441504	33810	0	441504	33810	
723.2	1336192	102362	23766	1359958	126118	3462594	285235	28483	3491077	293718	28483	3491077	293718	
723.3	175484	13442	42200	217684	55842	2092706	160301	231760	2424466	492061	231760	2424466	492061	
723.4	238973	18395	99322	338295	117627	915712	70144	14388	930100	84532	14388	930100	84532	
723.1	151215	11583	0	151215	11583	1768702	135483	793359	2562061	92862	793359	2562061	92862	
723.2	709404	54340	31070	740474	85410	444311	34034	131749	576060	165783	131749	576060	165783	
724.3	401373	30745	0	401373	30745	1329200	101817	30773	1358973	132590	30773	1358973	132590	
724.4	710219	54493	0	710219	54493	928794	71146	0	928794	71146	0	928794	71146	
725.1	281895	140948	4959	286854	145907	1848311	141581	0	1848311	141581	0	1848311	141581	
725.2	855049	65497	70720	925769	136217	999107	76532	0	999107	76532	0	999107	76532	
725.3	2342850	179462	139810	2476660	313272	390172	29887	0	390172	29887	0	390172	29887	
725.4	281430	21558	3	281433	21561	2299500	176142	0	2299500	176142	0	2299500	176142	
725.5	658752	50460	0	658752	50460	138147	10582	0	138147	10582	0	138147	10582	
725.6	601127	46046	0	601127	46046	537654	41184	0	537654	41184	0	537654	41184	
726.1	1329295	101817	0	1329295	101817	485129	37161	9555	494684	46716	9555	494684	46716	
726.2	177351	13585	0	177351	13585	719605	58122	6946	728551	64068	6946	728551	64068	
726.3	330433	25311	0	330433	25311	181295	12355	0	181295	12355	0	181295	12355	

Table C3.9 (8/11) Potential and safe abstraction rates by location

Location	Abstraction of boreholes		Abstraction of		Total potential		Total safe		Location	Abstraction of boreholes		Abstraction of		Total potential		Total safe	
	Potential	Safe	S/W	Safe	abstraction	abstraction	abstraction	abstraction		Potential	Safe	S/W	Safe	abstraction	abstraction	abstraction	abstraction
747.4	1953830	149663	0	0	1953830	149663	0	0	763.3	227756	17446	111764	339510	129200			
747.5	1403874	107537	0	0	1403874	107537	0	0	763.4	258128	129064	119792	377620	238856			
748.1	582540	44623	0	0	582540	44623	0	0	763.5	792226	60901	143155	940381	295146			
748.2	100810	7722	0	0	100810	7722	0	0	763.6	162911	11690	74731	227342	86421			
749	52949	4056	0	0	52949	4056	0	0	771.1	1014459	77784	114866	192650	65441			
751.1	1624250	124418	0	0	1624250	124418	0	0	771.2	2189175	167614	164009	2352184	331623			
751.2	791546	60632	12	12	791558	60644	0	0	771.3	358436	27454	37985	396421	65441			
751.3	7894074	604698	23039	0	7927113	637725	0	0	771.4	423685	34890	34890	458576	67344			
751.4	362138	27740	0	0	362138	27740	0	0	771.5	545690	41800	10937	656627	52737			
751.5	1993776	152723	0	0	1993776	152723	0	0	771.6	1801766	138017	328	1802114	138345			
752.1	1264827	96886	0	0	1264827	96886	0	0	772.1	1047015	131086	17638	1064553	148724			
752.2	1969112	150834	0	0	1969112	150834	0	0	772.2	469510	35735	14485	480995	50220			
752.3	298697	22860	0	0	298697	22860	0	0	772.3	266827	20592	16199	285016	26781			
752.4	414441	31746	10981	0	425422	42727	0	0	772.4	248291	19019	110419	358710	129438			
752.5	1698389	130097	0	0	1698389	130097	0	0	772.5	332763	25400	0	332763	25400			
752.6	1705572	130647	0	0	1705572	130647	0	0	772.6	246915	18914	0	256281	22880			
752.7	836942	64110	0	0	836942	64110	0	0	772.7	896635	68682	9366	896635	68682			
752.8	80275	6149	0	0	80275	6149	0	0	773.3	281695	21593	0	281695	21593			
753.1	757942	58058	69022	0	826964	127080	0	0	774.1	468580	35893	0	468580	35893			
753.2	2039139	157330	328136	0	2387275	485866	0	0	774.2	209399	16040	0	209399	16040			
753.3	6805469	521299	886316	0	7691785	1407615	0	0	774.3	117866	9029	0	117866	9029			
753.4	3056039	230993	1452804	0	4508843	1686897	0	0	774.4	412575	31603	5148	417723	36751			
753.5	3433143	262979	637329	0	4070472	900308	0	0	774.5	334048	25688	0	334048	25688			
753.6	4143083	316892	1823466	0	5966549	2142358	0	0	774.6	186685	14300	0	186685	14300			
753.7	4687669	359075	1023361	0	5750030	1421436	0	0	774.7	907098	69484	0	907098	69484			
754.1	1993362	152692	262065	0	2255427	414757	0	0	774.8	308164	23452	0	308164	23452			
754.2	382705	29315	238969	0	621694	269304	0	0	774.9	584642	44784	229114	584642	269440			
754.3	1392957	106701	188974	0	1581831	295575	0	0	811.1	526453	40326	0	526453	40326			
754.4	539521	41327	256866	0	796387	298193	0	0	811.2	154949	11869	0	154949	11869			
754.5	1455255	111473	199345	0	1654600	311018	0	0	811.3	145615	11154	0	145615	11154			
755.1	1368936	104246	894597	0	2255533	998845	0	0	811.4	604860	46332	61570	658430	97922			
755.2	41327	5389	5389	0	54910	46716	0	0	811.5	924092	70785	166192	1080284	226977			
755.3	226690	25025	156551	0	483250	192065	0	0	811.6	1101443	84371	45705	1147148	130076			
761.1	446760	34222	157843	0	604603	192065	0	0	812.1	2891063	221455	36683	2929745	260138			
761.2	181085	13871	90016	0	271101	103887	0	0	812.2	111427	27857	0	111427	27857			
761.3	242691	18590	120249	0	362940	138839	0	0	812.3	102677	7865	0	102677	7865			
761.4	216555	16588	108211	0	324766	124799	0	0	812.4	67207	5148	0	67207	5148			
761.5	289722	144861	112726	0	402448	257587	0	0	812.5	95210	7293	0	95210	7293			
762.1	78840	6039	128913	0	207153	134352	0	0	812.6	59739	4576	0	59739	4576			
762.2	123212	9438	77079	0	200291	86517	0	0	812.7	308338	29172	11582	392420	40754			
762.3	63473	4862	34179	0	97652	39041	0	0	813.1	158816	12012	0	158816	12012			
762.4	263762	21736	140663	0	424425	162390	0	0	813.2	209824	16073	0	209824	16073			
762.5	504506	38645	87315	0	591821	259694	0	0	813.3	406974	31174	0	406974	31174			
762.6	341634	26169	347197	0	373197	31732	0	0	814.1	173617	13299	0	173617	13299			
763.1	200546	15362	94492	0	295038	109854	0	0	814.2	624413	47830	0	624413	47830			
763.2	422972	32400	113720	0	536692	146120	0	0	814.3	332300	25454	8692	340992	34146			



Table C3.9 (10/11) Potential and safe abstraction rates by location

Location	Abstraction of boreholes				Location				Abstraction of boreholes				Total potential			
	Potential	Safe	S/W	Safe	914.1	Potential	Safe	S/W	Safe	1715792	131430	114750	1830562	Total safe	Total abstraction	
852.3	6293449	482078	2827894	9121143	3300772	1715792	131430	114750	1830562	246180						
853.1	10276349	787158	1851315	12127684	2638483	858305	65746	122403	980708	188149						
853.2	736833	56441	664659	1601292	920900	384572	29458	181762	566334	211220						
853.3	13276656	1018992	1896823	15173879	2913915	362172	27742	171071	633241	198813						
853.4	24084397	6021099	5530463	29623860	11569562	718739	55055	11705	729844	66160						
853.5	9379463	718667	1463228	10843081	2182095	171751	13156	2853	174804	18009						
853.6	8050440	616664	701383	8751823	1318047	7008000	536813	2237	7010237	539050						
854.1	6675354	148312	2259948	8553502	3743360	101816	7784	106077	207693	133861						
854.2	11616578	829756	2137924	13754502	2967680	160349	12598	79327	239876	91625						
854.3	9762226	1952445	3545464	13307690	5497909	698737	53523	132173	830910	185696						
854.4	5287166	881108	1297127	6564313	2178328	130880	10010	67421	198101	77431						
855.1	8823306	673965	496864	9320170	1172729	519030	39758	147587	666597	187325						
855.2	5146915	394254	2058986	7505901	2432240	519050	30760	84565	603624	124325						
855.3	3166183	242530	728049	3894232	970579	126946	9724	64982	191928	74706						
861.1	281099	149550	349491	630590	490041	423254	160302	214057	637311	363359						
861.2	963296	73786	484912	1448208	588700	265459	21666	109415	365874	122281						
861.3	1032370	79080	510624	1542794	599504	395018	30258	74795	469813	105053						
862.1	922226	79643	490662	1402888	551305	23042	17637	54181	284423	71818						
862.2	1747375	133849	864178	2811533	988027	530564	40641	111774	642338	152415						
862.3	504050	38610	249390	753440	288000	278294	21164	143009	419303	164173						
863.1	721240	55247	263884	985124	319131	89609	6864	50188	139797	57052						
863.2	793413	60775	445691	1238984	506266	44804	3432	31159	75963	34591						
863.3	1914758	70070	469872	1384630	599942	219954	16159	197848	408802	214000						
863.4	257626	19734	126625	384551	146659	69074	5291	34647	103721	39998						
863.5	1084642	83084	502784	1587426	585868	67207	5148	33903	101110	39051						
863.6	173617	13290	100374	113673	75943	98943	7579	48822	147765	58407						
864.1	927664	71961	312464	1240148	383525	84008	6435	41133	125141	47568						
864.2	1914861	319110	627841	2542502	946951	63072	4831	23139	86211	27970						
864.3	1177984	90234	582033	1760017	672267	59739	4576	30170	89909	34746						
865.1	3868883	296356	670864	4339547	987020	54139	4147	27373	61512	31520						
865.2	716872	54912	355427	1072299	410339	118202	9054	36885	155087	45939						
865.3	1152816	88306	433411	1586227	521717	67307	5148	34640	101847	39788						
865.4	765410	58630	378364	1143974	437194	93343	7150	39030	152373	46180						
865.5	220045	168323	255153	2455198	423676	413706	31690	104278	517984	135968						
911.1	67207	5148	31039	98246	36187	39204	3003	19920	59124	22923						
911.2	42938	3289	20321	63259	23610	592028	296014	39093	631121	335107						
911.3	496517	36033	58439	554936	96472	147685	14760	35267	227952	50027						
911.4	134413	10296	64319	198730	74613	30164	23452	162784	45948	176236						
911.5	142613	10924	131938	274651	182862	96343	7392	150534	1113877	224328						
912.1	323102	24903	164122	489224	189025	117812	9009	60881	177693	69090						
912.2	165150	79127	749207	245257	91834	177186	13572	69336	246724	83110						
912.3	502824	38516	61199	564023	99715	108277	8294	54402	162879	62696						
912.4	896586	68678	102519	999105	171107	495991	37993	160218	656209	198211						
912.5	280040	21451	191952	471992	213403	286160	21920	90962	377142	112902						
913.1	343501	26312	144336	488037	170848	359423	27532	93405	452828	120937						
913.2	431243	33033	200001	631244	233034	85675	6578	42136	128011	48714						

(Unit : m3/year)

Table C3.9 (11/11) Potential and safe abstraction rates by location

Location	Abstraction of boreholes		Abstraction of		Total potential		Location	Abstraction of boreholes		Abstraction of		Total potential	
	Potential	Safe	S/W	Safe	abstraction	Safe		Potential	Safe	S/W	Safe	abstraction	Safe
936.1	183960	14001		99120	283080	113211							
936.2	379904	29101		129914	509818	159015							
936.3	280473	21484		98084	378557	119568							
936.4	474136	36319		155513	620640	191832							
937.1	532608	40798		85975	618583	126773							
937.2	405880	31090		89260	495140	120350							
937.3	567356	43450		86910	654266	130369							
937.4	279619	21419		84666	364285	106083							
938.1	102677	7865		51743	154420	59608							
938.2	220518	16892		59953	280471	76845							
938.3	41071	3146		21193	62264	24339							
939.1	560319	42920		87448	647767	130368							
939.2	62747	4806		42122	104669	46928							
939.3	764729	58578		57607	822536	116385							
93A.1	121545	20258		104071	225616	124329							
93A.2	688563	51212		136636	803199	185848							
93A.3	229623	17589		115121	344744	132710							
93A.4	192286	14729		97400	289686	112129							
93A.5	593941	45496		92516	686457	138012							
440.A	994260	76160		415676	1409936	491836							
Total	2330701324	193027260		426136775	2756928099	619164035							

Table C3.10 (1/2) Aquifer characteristics by rock type

No.	Longitude (degree)	Latitude (degree)	Elevation (m)	Total depth (m)	Water level Struck (m)	Rest Diameter (m)	Rest Diameter (cm)	Pumping Number	test Yield (l/min)	test Drawdown (m)	Pumping hours (hours)	Recovery hours (hours)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient
<b>Rock type = 1 ( Total number of boreholes = 3882 )</b>														
Number of data	3416	3416	3279	3854	3529	3442	3539	2336	3448	1832	3287	823	426	403
Data percentage	88.00	88.00	84.47	99.28	90.91	88.67	91.16	61.72	88.82	47.19	84.67	21.20	10.97	10.38
Minimum	34.02	-3.92	6.00	3.00	1.00	0.00	3.00	1.00	1.00	0.00	0.30	0.50	0.00	0.00
Maximum	40.60	4.83	3120.00	939.00	369.00	287.00	90.00	8.00	945.00	211.80	99.00	80.00	1.85	0.61
Average	36.46	-0.56	1762.74	124.70	93.96	48.68	16.84	1.52	124.19	37.05	16.97	6.31	0.02	0.03
standard deviation	0.75	1.08	456.99	63.46	58.37	41.20	4.24	0.91	107.81	34.31	13.06	8.77	0.12	0.07
<b>Rock type = 2 ( Total number of boreholes =1592 )</b>														
Number of data	1406	1406	1418	1577	1202	1221	1353	850	1163	743	1095	287	106	103
Data percentage	88.32	88.32	89.07	99.06	75.50	76.70	84.99	54.02	73.05	46.67	68.78	18.03	6.66	6.47
Minimum	34.02	-4.30	14.00	2.00	1.00	1.00	2.00	1.00	1.00	0.10	0.30	1.00	0.00	0.00
Maximum	41.45	5.33	2385.00	341.00	244.00	190.00	51.00	78.00	760.00	171.00	99.00	58.00	0.98	0.72
Average	36.53	-0.42	1266.59	79.59	55.30	26.40	15.54	1.46	75.62	31.08	15.74	7.60	0.02	0.03
standard deviation	1.66	1.68	441.41	42.88	37.50	25.94	4.17	2.73	86.55	29.46	14.72	11.58	0.10	0.08
<b>Rock type = 3 ( Total number of boreholes =878 )</b>														
Number of data	666	667	566	876	786	777	790	611	709	430	681	239	131	127
Data percentage	75.85	75.97	66.74	99.77	89.52	88.50	89.98	69.59	80.75	48.97	77.56	27.22	14.92	14.46
Minimum	34.07	-4.57	3.00	4.00	1.00	1.00	6.00	1.00	1.00	0.20	1.00	1.00	0.00	0.00
Maximum	41.87	5.03	2640.00	310.00	258.00	247.00	53.00	4.00	947.00	312.00	99.00	59.00	0.45	0.57
Average	38.72	-1.78	439.48	81.22	54.25	34.80	17.07	1.20	92.48	17.39	17.32	5.80	0.01	0.02
standard deviation	1.98	2.53	585.84	62.98	47.98	37.45	4.71	0.58	106.45	29.87	16.01	8.31	0.04	0.06
<b>Rock type = 4 ( Total number of boreholes =162 )</b>														
Number of data	129	129	128	160	150	146	142	133	143	110	133	66	28	28
Data percentage	79.63	79.63	79.01	98.77	92.59	90.12	87.65	82.10	88.27	67.90	82.10	40.74	17.28	17.28
Minimum	34.10	-4.58	8.00	10.30	1.90	1.00	11.00	1.00	2.50	1.00	1.00	0.25	0.00	0.00
Maximum	39.70	5.03	2715.00	307.00	219.00	156.00	31.00	5.00	800.00	124.10	99.00	36.00	0.02	0.10
Average	36.79	-1.10	1079.47	82.53	54.39	28.53	16.42	1.26	123.14	25.87	16.00	4.57	0.00	0.02
standard deviation	1.86	2.20	631.99	60.17	43.21	30.44	5.05	0.61	160.30	24.88	15.74	5.82	0.01	0.03
<b>Rock type = 5 ( Total number of boreholes =67 )</b>														
Number of data	52	52	46	67	58	52	62	49	50	46	46	30	10	9
Data percentage	77.61	77.61	68.66	100.00	86.57	77.61	92.54	73.13	74.63	68.66	71.64	44.78	14.93	13.43
Minimum	34.47	-3.73	168.00	23.00	6.00	1.00	11.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Maximum	40.10	3.90	1850.00	220.00	203.00	102.00	30.00	4.00	619.00	120.00	24.00	46.00	0.28	0.03
Average	36.87	0.44	1073.65	91.28	51.16	25.97	17.69	1.29	94.52	32.28	13.13	9.63	0.03	0.01
standard deviation	1.86	1.98	432.74	46.83	40.50	22.55	3.99	0.68	116.59	31.16	9.50	11.76	0.09	0.01



Table C3.10 (2/2) Aquifer characteristics by rock type

No.	Longitude (degree)	Latitude (degree)	Elevation (m)	Total depth (m)	Water level Struck (m)	Rest Diameter (m)	Pumping Number	Pumping Yield (l/min)	test Yield Drawdown (m)	Pumping hours (hours)	Recovery hours (hours)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient
Rock type = 6 ( Total number of boreholes = 72 )													
Number of data	48	53	48	72	67	63	70	52	56	54	39	23	22
Data percentage	71.64	73.61	66.67	100.00	93.06	87.50	97.22	72.22	77.78	75.00	54.17	31.94	30.56
Minimum	34.13	-2.37	250.00	15.00	6.00	3.00	11.00	1.00	11.00	3.00	1.00	0.00	0.00
Maximum	40.02	4.58	2700.00	473.00	420.00	213.00	34.00	4.00	455.00	38.00	50.00	0.37	0.82
Average	35.86	0.62	1255.85	90.44	63.22	28.98	16.79	1.25	126.16	17.46	5.54	0.02	0.05
standard deviation	1.51	1.89	594.53	67.07	61.97	33.94	4.33	0.59	98.90	9.37	6.46	0.08	0.17
Rock type = 7 ( Total number of boreholes = 52 )													
Number of data	61	50	45	52	46	42	46	44	45	45	24	19	18
Data percentage	91.64	96.15	92.31	100.00	88.46	80.77	88.46	84.62	86.54	86.54	46.15	36.54	34.52
Minimum	1.51	-4.22	21.00	17.00	4.00	1.00	10.00	1.00	6.00	1.00	1.00	0.00	0.00
Maximum	71.64	2.48	2179.00	270.00	244.00	115.00	25.00	4.00	758.00	25.00	8.00	0.50	0.13
Average	36.15	-0.41	1332.63	106.71	79.37	26.60	15.22	1.36	179.40	13.13	3.38	0.03	0.02
standard deviation	6.77	1.06	498.58	58.38	57.11	27.93	3.67	0.72	167.97	8.51	2.37	0.11	0.03
Rock type = 8 ( Total number of boreholes = 20 )													
Number of data	67	16	13	20	15	16	16	15	15	14	11	5	5
Data percentage	85.07	80.00	85.00	100.00	76.00	80.00	80.00	75.00	75.00	70.00	55.00	25.00	25.00
Minimum	1.51	-3.70	167.00	22.00	16.00	9.00	13.00	1.00	5.00	1.00	2.00	0.00	0.00
Maximum	91.04	3.83	1996.00	261.00	225.00	107.00	20.00	2.00	225.00	24.00	24.00	0.03	0.17
Average	37.13	-0.19	1054.23	103.95	83.00	38.88	15.81	1.40	76.25	18.57	5.91	0.01	0.04
standard deviation	11.24	1.99	566.58	64.47	55.16	33.41	2.14	0.51	58.93	8.62	6.28	0.01	0.07
Rock type = 9 ( Total number of boreholes = 781 )													
Number of data	571	568	384	723	410	340	536	333	332	312	130	192	182
Data percentage	73.11	72.73	49.17	92.57	52.50	43.53	68.63	42.64	42.51	39.95	16.65	24.58	23.30
Minimum	34.00	-4.67	16.00	6.00	1.00	1.00	6.00	1.00	1.00	1.00	1.00	0.00	0.00
Maximum	40.66	4.93	2730.00	300.00	223.00	163.00	200.00	649.00	444.00	79.00	44.00	0.21	0.47
Average	35.07	0.39	1391.61	78.66	55.76	25.68	17.60	3.08	61.47	12.59	3.50	0.01	0.02
standard deviation	1.13	1.58	379.40	47.39	39.12	27.21	13.42	35.51	82.94	9.78	4.39	0.02	0.05

Table C3.11 (1/8) Aquifer characteristics by district

	Longitude (degree)	Latitude (degree)	Elevation (m)	Total No. of depth (m)	Rock type	Water level struck (m)	real Diameter (cm)	Pumping Number	Yield (l/min)	Drawdown (m)	Pumping hours (hours)	Recovery hours (hours)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient
<b>District code = 11 ( Naitobi )</b>														
Total number of boreholes = 657														
Number of data	563	556	852	626	649	628	627	375	626	302	597	156	90	88
Data percentage	85.89	84.63	99.24	95.59	96.76	95.59	94.37	57.06	95.29	45.97	90.87	23.74	13.70	13.39
Minimum	-2.35	908	18	1	1	2	7	1	1	1	1	1	5.37E-05	3.96E-04
Maximum	37.13	2436	473	7	9	420	210	5	828	176.2	99	60	1.10E-01	4.20E-01
Average	36.00	1721.31	152.46	1.86	1.73	112.53	56.73	1.56	128.41	38.50	18.62	7.58	0.01	0.03
Standard deviation	0.09	142.70	62.28	0.90	0.51	60.78	32.67	0.91	106.51	33.16	15.03	9.72	0.02	0.06
<b>District code = 21 ( Kilambu )</b>														
Total number of boreholes = 1028														
Number of data	927	896	1016	991	1020	991	986	704	992	500	953	244	112	109
Data percentage	90.18	87.16	99.03	96.40	99.22	96.40	95.91	68.40	96.50	46.66	92.70	23.74	70.89	10.60
Minimum	-1.67	152	12	1	1	2	3	1	1	0.6	1	1	1.69E-05	1.89E-04
Maximum	37.48	2815	341	9	9	290	265	7	758	190	99	58	6.10E-01	4.20E-01
Average	36.82	1783.44	133.96	2.13	1.14	100.13	45.85	1.63	141.48	41.51	17.02	7.01	0.02	0.03
Standard deviation	0.16	271.60	54.03	1.12	0.87	51.45	31.57	0.96	114.22	33.52	11.84	9.31	0.06	0.07
<b>District code = 22 ( Kirinyaga )</b>														
Total number of boreholes = 15														
Number of data	9	8	15	15	12	15	14	14	14	11	14	10	2	2
Data percentage	60.00	53.33	100.00	100.00	80.00	100.00	93.33	93.33	93.33	73.33	93.33	66.67	13.33	13.33
Minimum	-0.77	430	48	1	1	24	15	1	11	1	9	1.00	4.39E-04	2.37E-03
Maximum	37.32	1615	146	2	9	110	80	3	270	93	24	24.00	2.89E-03	1.48E-02
Average	37.15	1199.00	81.40	1.67	2.75	49.67	21.64	1.29	102.14	36.15	21.21	5.80	0.00	0.01
Standard deviation	0.33	346.74	31.14	0.55	2.34	25.50	20.06	0.81	79.82	36.17	5.88	6.92	0.00	0.01
<b>District code = 23 ( Muranga )</b>														
Total number of boreholes = 104														
Number of data	100	99	103	99	104	100	93	63	98	53	95	20	6	6
Data percentage	96.15	95.19	99.04	95.19	100.00	96.15	89.42	60.58	94.23	50.96	91.35	19.23	5.77	5.77
Minimum	-1.05	1052	15	1	1	3	15	1	1	5	1	1	6.32E-05	6.06E-04
Maximum	37.35	1930	218	6	9	183	115	5	945	183	73	27	8.37E-04	7.26E-03
Average	37.16	1437.90	102.53	1.77	1.58	67.15	20.78	1.76	100.29	57.83	17.04	5.60	0.00	0.00
Standard deviation	0.09	137.09	48.07	0.69	1.38	41.96	19.36	1.02	123.97	41.80	12.39	7.11	0.00	0.00
<b>District code = 24 ( Nyandarua )</b>														
Total number of boreholes = 156														
Number of data	152	144	151	121	146	146	112	63	122	57	110	24	8	8
Data percentage	97.44	92.31	96.79	77.56	93.59	75.64	71.79	40.38	78.21	36.54	70.51	15.38	5.13	5.13
Minimum	-0.97	1143	6	1	1	6	12	1	1	2	1	1	1.94E-04	1.66E-03
Maximum	37.20	2941	300	4	9	276	238	4	455	96.1	63	26	1.72E-02	6.49E-02
Average	36.44	2420.77	126.15	1.64	1.19	107.11	67.83	1.43	65.32	33.21	14.21	5.92	0.00	0.01
Standard deviation	0.12	254.77	59.26	0.74	1.02	54.52	52.13	0.78	70.87	23.60	9.06	6.70	0.01	0.03

Table C3.11 (2/8) Aquifer characteristics by district

	Longitude (degree)	Latitude (degree)	Elevation (m)	Total depth (m)	No. of horizons	Rock type	Water level struck (m)	rest Diameter (m)	Pumping Number	tests Yield (/min)	Drawdown (m)	Pumping hours (hours)	Recovery hours (hours)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient	
<b>District code = 25 (Nyeri)</b>																
Total number of boreholes = 60																
Number of data	56	54	90.00	100.00	95.00	59	93.33	93.33	50	97	2.8	54	12	6	5	
Data percentage	93.33	90.00	90.00	100.00	95.00	93.33	93.33	93.33	50.00	95.00	46.67	90.00	20.00	6.33	8.33	
Minimum	-0.57	914	2438	244	3	1	9	14	1	2	2	2	1	7.32E-05	5.30E-04	
Maximum	37.33	-0.02	1925.41	121.98	1.89	1.34	84.93	49.80	4	324	188.5	49	5	6.97E-04	6.11E-03	
Average	36.94	-0.29	1925.41	121.98	1.89	1.34	84.93	49.80	1.60	99.00	40.34	15.17	2.33	0.00	0.00	
Standard deviation	0.11	0.12	206.36	47.90	0.99	1.23	41.12	20.66	0.72	70.90	31.21	10.17	1.61	0.00	0.00	
<b>District code = 31 (Kilifi)</b>																
Total number of boreholes = 212																
Number of data	181	169	79.72	100.00	94.61	211	93.07	91.98	136	177	7.6	170	43	12	12	
Data percentage	85.36	79.72	79.72	100.00	94.61	93.07	93.07	91.98	64.15	83.49	35.85	60.19	20.28	6.66	5.66	
Minimum	-4.30	2220	310	4	1	1	1	10	1	1	0.5	1	1	9.70E-05	7.17E-04	
Maximum	40.17	-2.63	122.62	70.83	1.38	3.03	47.17	28.24	4	636	97.2	81	36	1.02E-02	6.07E-02	
Average	39.84	-3.46	122.62	70.83	1.38	3.03	47.17	28.24	1.34	96.33	14.29	17.72	6.81	0.00	0.01	
Standard deviation	0.18	0.27	309.86	67.33	0.61	0.60	47.21	27.93	0.71	109.37	20.09	15.13	5.51	0.00	0.02	
<b>District code = 32 (Kwale)</b>																
Total number of boreholes = 310																
Number of data	230	178	57.42	100.00	91.29	304	93.66	92.26	216	269	17.6	245	71	22	21	
Data percentage	74.19	57.42	57.42	100.00	91.29	93.06	93.66	92.26	70.32	83.55	56.77	79.03	22.90	7.10	6.77	
Minimum	-4.67	1830	307	7	2	2	5	2	1	2	0.2	1	0.25	3.47E-04	9.63E-04	
Maximum	39.63	-3.52	217.20	62.75	1.47	3.06	36.39	19.97	3	947	130.1	99	26	4.46E-01	9.88E-02	
Average	39.36	-4.23	217.20	62.75	1.47	3.06	36.39	19.97	1.07	86.19	11.66	12.73	3.02	0.02	0.01	
Standard deviation	0.20	0.22	393.62	47.46	0.73	0.71	31.99	15.93	0.29	116.77	17.68	16.32	4.42	0.09	0.03	
<b>District code = 33 (Lamu)</b>																
Total number of boreholes = 14																
Number of data	14	14	100.00	100.00	97.14	12	42.66	42.86	8	9	1	7	2	2	2	
Data percentage	100.00	100.00	100.00	100.00	97.14	85.71	42.66	42.86	57.14	64.29	7.14	50.00	14.29	14.29	14.29	
Minimum	-2.40	11	200	112	1	2	6	7	1	28	2	6	1	3.96E-02	1.28E-02	
Maximum	41.08	-1.87	96.50	52.71	1.00	2.83	13.75	12.00	2	600	2	12	3	4.69E-02	9.33E-02	
Average	40.77	-2.18	96.50	52.71	1.00	2.83	13.75	12.00	1.13	153.87	2.00	10.00	2.00	0.02	0.06	
Standard deviation	0.24	0.22	64.01	26.01	0.00	0.39	6.21	11.74	0.35	197.91	2.00	2.00	1.41	0.03	0.06	
<b>District code = 34 (Mombasa)</b>																
Total number of boreholes = 25																
Number of data	24	25	100.00	100.00	86.00	25	86.00	80.00	11	24	6	22	4	0	0	
Data percentage	96.00	100.00	100.00	100.00	86.00	100.00	86.00	80.00	44.00	96.00	32.00	88.00	16.00			
Minimum	-4.08	11	183	154	3	3	13	10	1	8	1	2	1			
Maximum	39.78	-3.90	42.12	63.04	1.41	3.00	28.95	20.05	1.00	128.96	6.94	36.00	3.00			
Average	39.66	-4.01	42.12	63.04	1.41	3.00	28.95	20.05	1.00	128.96	6.94	36.00	3.00			
Standard deviation	0.06	0.07	48.85	42.89	0.91	0.00	16.18	10.50	0.00	185.48	6.63	29.09	2.45			

Table C3.11 (3/8) Aquifer characteristics by district

	Longitude (degree)	Latitude (degree)	Elevation (m)	Total No. of horizons	Rock type	Water level struck (m)	rest Diameter (cm)	Pumping Number	Yield (l/min)	Drawdown (m)	Pumping hours (hours)	Recovery hours (hours)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient
<b>District code = 35 (Taita Taveta)</b>														
Total number of boreholes = 74														
Number of data	64	63	74	63	74	60	58	30	54	26	52	13	14	12
Data percentage	86.49	85.14	100.00	85.14	100.00	81.08	82.43	40.34	72.97	35.14	70.27	20.27	16.92	16.22
Minimum	37.60	-3.03	6	5	1	2	12	1	2	0.1	3	1	4.71E-04	2.18E-03
Maximum	59.08	-2.78	2100	5	0	145	133	4	453	10.7	56	35	9.81E-01	1.28E-01
Average	38.34	-3.45	752.08	1.84	2.00	49.37	22.76	1.83	125.59	26.57	18.50	9.67	0.08	0.03
Standard deviation	6.54	0.17	274.30	1.03	0.95	37.09	21.75	1.02	106.26	27.61	11.75	9.76	0.26	0.04
<b>District code = 36 (Tana River)</b>														
Total number of boreholes = 15														
Number of data	9	9	15	4	13	4	6	5	8	2	5	2	0	0
Data percentage	60.00	60.00	100.00	26.67	86.67	26.67	40.00	33.33	53.33	13.33	33.33	13.33		
Minimum	38.73	-2.42	76	1	1	60	52	1	30	23.4	5	7		
Maximum	40.25	-1.67	379	2	7	150	140	1	54	25.1	24	7		
Average	39.71	-1.96	177.11	1.50	3.38	95.00	87.83	1.00	38.75	24.25	17.00	7.00		
Standard deviation	0.68	0.35	123.13	0.58	1.50	38.31	28.56	0.00	6.60	1.20	5.84	0.00		
<b>District code = 41 (Embu)</b>														
Total number of boreholes = 129														
Number of data	13	13	127	106	117	98	84	87	90	88	89	65	2	2
Data percentage	10.08	9.39	98.45	82.17	90.70	75.97	65.12	67.44	69.77	66.22	68.99	50.39	1.55	1.55
Minimum	35.85	-0.72	998	22	1	7	1	1	2.5	2	1	1	4.89E-04	2.52E-03
Maximum	37.78	0.17	1860	158	3	186	91	4	720	9.4	24	41	2.93E-03	1.66E-02
Average	37.52	-0.50	1217.75	58.43	2.05	44.20	17.16	1.07	70.44	31.86	6.08	4.54	0.00	0.01
Standard deviation	0.51	0.24	199.74	21.55	1.75	25.64	15.95	0.37	112.49	18.49	6.27	6.11	0.00	0.01
<b>District code = 42 (Isiolo)</b>														
Total number of boreholes = 62														
Number of data	41	37	60	52	60	51	52	35	46	24	40	19	11	11
Data percentage	66.13	59.68	96.77	83.87	96.77	82.26	83.87	56.45	74.19	38.71	64.52	30.65	17.74	17.74
Minimum	36.75	-0.57	30	1	1	7	1	1	4	1	1	1	2.72E-05	2.37E-04
Maximum	39.48	1.98	1524	4	9	207	140	4	500	96	78	25	3.72E-02	2.11E-01
Average	37.87	0.65	835.00	1.77	2.37	66.59	43.12	1.43	119.39	24.11	25.60	7.05	0.01	0.03
Standard deviation	0.77	0.47	453.67	0.76	1.00	44.83	37.64	0.81	101.02	29.97	16.32	7.06	0.01	0.06
<b>District Code = 43 (Kitui)</b>														
Total number of boreholes = 73														
Number of data	58	58	72	58	68	59	58	38	57	30	51	20	7	7
Data percentage	79.45	79.45	98.63	79.45	94.52	80.82	79.45	52.05	78.08	41.10	69.86	27.40	9.39	9.39
Minimum	37.60	-2.25	396	22	1	3	13	1	1	1	1	1	1.63E-04	9.68E-04
Maximum	38.43	-0.65	1737	198	4	143	108	5	619	132.1	72	43	3.49E-02	1.46E-01
Average	38.06	-1.41	1022.67	91.07	2.48	45.12	25.79	1.81	71.30	44.88	23.27	11.40	0.01	0.03
Standard deviation	0.17	0.40	221.49	37.40	1.50	34.23	23.31	0.95	99.23	36.44	16.36	12.68	0.02	0.05

Table C3.11 (4/8) Aquifer characteristics by district

Longitude (degree)		Latitude (degree)		Elevation (m)		Total No. of depth horizons (m)		Rock type		Water level struck (m)		Pumping test		Pumping rate		Pumping yield		Recovery		Transmissivity		Storage coefficient	
												Number		Yield (l/min)		hour (hours)		hour (hours)		(m <sup>2</sup> /min)			
<b>District code = 44 ( Machakos )</b>																							
Total number of boreholes = 307																							
Number of data																							
Date percentage																							
Minimum																							
Maximum																							
Average																							
Standard deviation																							
<b>District code = 45 ( Marsabit )</b>																							
Total number of boreholes = 497																							
Number of data																							
Date percentage																							
Minimum																							
Maximum																							
Average																							
Standard deviation																							
<b>District code = 46 ( Meru )</b>																							
Total number of boreholes = 116																							
Number of data																							
Date percentage																							
Minimum																							
Maximum																							
Average																							
Standard deviation																							
<b>District code = 51 ( Garissa )</b>																							
Total number of boreholes = 77																							
Number of data																							
Date percentage																							
Minimum																							
Maximum																							
Average																							
Standard deviation																							
<b>District code = 52 ( Mandera )</b>																							
Total number of boreholes = 43																							
Number of data																							
Date percentage																							
Minimum																							
Maximum																							
Average																							
Standard deviation																							

**Table C3.11 (5/8) Aquifer characteristics by district**

	Longitude (degree)	Latitude (degree)	Elevation (m)	Total depth (m)	No. of horizons	Rock type	Water level struck (m)	Test Diameter (cm)	Pumping Number	Yield (l/min)	Drawdown (m)	Pumping hours (hours)	Recovery hours (hours)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient	
<b>District code = 53 ( Wajir )</b>																
Total number of boreholes = 112																
Number of data 97																
Data percentage 86.81																
Minimum 56.81																
Maximum 86.75																
Average 77																
Standard deviation 0.45																
<b>District code = 61 ( Kisii )</b>																
Total number of boreholes = 26																
Number of data 18																
Data percentage 64.29																
Minimum -0.63																
Maximum 0.87																
Average -0.63																
Standard deviation 0.10																
<b>District code = 62 ( Kisumu )</b>																
Total number of boreholes = 133																
Number of data 100																
Data percentage 97.74																
Minimum -0.83																
Maximum 0.20																
Average -0.13																
Standard deviation 0.18																
<b>District code = 63 ( Siaya )</b>																
Total number of boreholes = 161																
Number of data 129																
Data percentage 80.12																
Minimum -0.50																
Maximum 0.30																
Average 0.14																
Standard deviation 0.10																
<b>District code = 64 ( South Nyanza )</b>																
Total number of boreholes = 262																
Number of data 199																
Data percentage 75.95																
Minimum -1.33																
Maximum 0.50																
Average -0.64																
Standard deviation 0.20																

Table C3.11 (6/8) Aquifer characteristics by district

	Longitude (degree)	Latitude (degree)	Elevation (m)	Total No. of depth horizons (m)	Rock type	Water level struck (m)	Test Diameter (cm)	Pumping Number	Yield (l/min)	Drawdown (m)	Pumping hours (hours)	Recovery hours (hours)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient
<b>District code = 71 (Baringo)</b>														
Total number of boreholes = 43														
Number of data	34		33	37	40	36	39	25	33	17	52	14	7	7
Data percentage	79.07		78.74	100.00	93.02	86.37	90.70	58.14	76.74	39.53	74.42	32.56	16.28	16.28
Minimum	35.63	-0.03	914	23	1	5	4	1	12	1	3	1	2.78E-04	1.40E-03
Maximum	36.70	1.37	2134	4	9	244	80	3	500	137	50	57	5.71E+02	1.14E+01
Average	35.95	0.36	1531.52	1.59	1.59	108.11	69.31	1.40	134.18	26.18	22.41	12.86	0.01	0.02
Standard deviation	0.21	0.43	415.69	0.64	1.64	49.46	54.17	0.58	97.48	33.04	8.91	18.31	0.02	0.04
<b>District code = 72 (Egeyo Marakwet)</b>														
Total number of boreholes = 14														
Number of data	10		10	14	13	14	13	9	13	6	13	7	2	2
Data percentage	71.43		71.43	100.00	92.86	100.00	92.86	64.29	92.86	57.14	92.86	50.00	14.29	14.29
Minimum	35.47	0.55	689	47	1	33	15	1	6	3	12	3	1.01E-03	6.78E-03
Maximum	35.58	0.77	2300	3	2	176	85	4	165	113.6	72	13	6.34E-03	5.43E-02
Average	35.51	0.70	1320.30	1.50	1.46	67.07	38.36	2.33	81.16	32.03	31.69	7.29	0.00	0.03
Standard deviation	0.04	0.04	701.85	0.65	0.52	36.81	28.12	1.22	56.04	34.99	16.33	4.15	0.00	0.03
<b>District code = 73 (Kajiado)</b>														
Total number of boreholes = 323														
Number of data	266		249	294	318	289	295	217	273	192	264	129	56	54
Data percentage	82.35		77.09	99.07	98.45	89.47	89.47	67.18	84.52	59.44	81.73	39.94	17.34	16.72
Minimum	35.85	-2.98	10	20	1	5	2	1	1	0.1	1	0.5	2.35E-05	1.68E-04
Maximum	37.85	-0.95	2286	6	9	273	31	6	600	144.2	97	58	5.03E-01	2.02E-01
Average	36.92	-1.90	1348.08	1.75	1.91	80.20	39.71	1.44	125.97	40.59	22.07	8.72	0.02	0.02
Standard deviation	0.32	0.51	278.95	0.82	1.58	52.32	36.47	0.82	104.35	37.05	12.70	11.24	0.09	0.05
<b>District code = 74 (Kericho)</b>														
Total number of boreholes = 54														
Number of data	51		51	45	53	45	47	35	46	27	42	6	2	2
Data percentage	94.44		94.44	100.00	98.15	83.03	87.04	64.81	85.19	50.00	77.78	11.11	3.70	3.70
Minimum	35.05	-0.73	15	30	1	9	12	1	1	3	5	1	1.26E-04	9.94E-04
Maximum	35.65	-0.03	3120	244	9	223	34	4	606	160.3	86	9	4.88E-04	3.51E-03
Average	35.36	-0.30	2036.90	1.89	1.85	105.87	40.33	1.83	179.85	55.41	18.86	4.67	0.00	0.00
Standard deviation	0.18	0.19	463.49	1.03	2.35	55.90	30.87	1.15	120.56	46.92	15.67	3.72	0.00	0.00
<b>District code = 75 (Laikipia)</b>														
Total number of boreholes = 239														
Number of data	229		230	210	239	209	208	131	218	102	207	19	10	10
Data percentage	95.82		96.23	100.00	100.00	87.45	87.03	54.81	91.21	42.68	86.61	7.95	4.18	4.18
Minimum	36.13	-0.18	570	19	1	7	2	1	1	2	1	1	5.46E-05	3.74E-04
Maximum	37.38	0.85	2804	308	6	307	63	8	677	204.2	52	42	5.23E-03	2.08E-02
Average	36.84	0.26	1909.10	1.90	1.30	105.18	43.63	1.82	65.64	65.41	13.59	5.74	0.00	0.01
Standard deviation	0.29	0.24	219.20	0.95	0.65	68.89	25.18	1.12	79.65	43.78	9.15	9.15	0.00	0.01

**Table C3.11 (7/8) Aquifer characteristics by district**

	Longitude (degree)	Latitude (degree)	Elevation (m)	Total No. of depth (m)	Rock type	Water level: struck (m)	rest Diameter (m)	Pumping Number	Yield (l/min)	Drawdown (m)	Pumping hours (hours)	Recovery hours (hours)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient
<b>District code = 76 ( Nakuru )</b>														
Total number of boreholes = 767														
Number of data	718	705	91.92	99.74	678	675	673	446	676	291	643	137	4.8	4.4
Data percentage	93.61	93.61	91.92	99.74	98.44	98.01	87.74	58.15	88.14	37.94	83.63	17.66	6.26	5.74
Minimum	35.27	-1.00	250	10	1	1	1	1	1	0.1	1	1	3.15E-05	1.85E-04
Maximum	39.88	0.24	2987	939	9	290	287	40	690	115.8	99	80	1.85E+00	8.24E-01
Average	36.12	-0.40	2087.91	135.29	1.75	106.58	69.55	1.43	142.73	27.59	16.25	4.77	0.08	0.08
Standard deviation	0.30	0.27	310.25	70.48	0.83	62.27	56.45	0.65	112.13	25.91	13.18	7.93	0.27	0.17
<b>District code = 78 ( Narok )</b>														
Total number of boreholes = 38														
Number of data	23	25	65.79	100.00	68.42	65.79	60.53	43.16	60.53	63.16	57.89	31.58	15.79	15.79
Data percentage	60.53	60.53	65.79	100.00	68.42	65.79	60.53	43.16	60.53	63.16	57.89	31.58	15.79	15.79
Minimum	34.87	-1.80	1500	48	1	6	2	1	3	0.1	1	1	1.33E-04	1.24E-03
Maximum	36.33	-0.58	2758	503	3	267	213	2.5	188	60.8	48	13	9.77E-03	3.74E-02
Average	35.79	-1.16	2037.92	147.39	1.73	82.36	56.43	1.33	74.04	36.22	17.73	6.75	0.00	0.02
Standard deviation	0.43	0.34	306.27	67.73	0.53	62.03	55.39	0.64	56.02	23.89	11.28	3.70	0.00	0.02
<b>District code = 79 ( Samburu )</b>														
Total number of boreholes = 69														
Number of data	62	60	86.96	100.00	72.46	72.46	71.01	40.58	59.42	28.99	52.17	23.19	10.14	10.14
Data percentage	89.86	89.86	86.96	100.00	72.46	72.46	71.01	40.58	59.42	28.99	52.17	23.19	10.14	10.14
Minimum	36.55	0.57	229	10	1	1	3	1	4	1.2	1	1	5.16E-05	3.71E-04
Maximum	37.72	1.98	2134	206	4	169	146	4	364	145	99	49	6.73E-02	5.43E-02
Average	37.19	1.10	1261.37	96.83	1.59	64.10	30.88	1.79	70.17	57.16	29.03	12.06	0.01	0.01
Standard deviation	0.37	0.35	456.66	46.84	0.76	39.21	26.13	0.96	71.68	43.10	30.23	16.32	0.03	0.02
<b>District code = 81 ( Trans Nzola )</b>														
Total number of boreholes = 53														
Number of data	50	50	94.34	100.00	61.10	61.10	63.02	62.28	61.70	39.62	75.47	13.21	5.89	1.89
Data percentage	94.34	94.34	94.34	100.00	61.10	61.10	63.02	62.28	61.70	39.62	75.47	13.21	5.89	1.89
Minimum	34.78	0.82	506	15	1	3	0	1	1	1.5	1	1	5.09E-03	2.16E-02
Maximum	35.45	1.23	2180	201	3	109	55	4	189	182	24	6	5.09E-03	2.16E-02
Average	34.98	1.06	1567.00	66.40	1.44	39.23	18.30	1.33	39.63	34.69	6.25	2.67	0.01	0.02
Standard deviation	0.13	0.13	653.21	45.80	0.67	23.29	11.27	0.74	41.35	45.20	6.16	2.37	0.01	0.02
<b>District code = 92 ( Turkana )</b>														
Total number of boreholes = 412														
Number of data	315	148	76.46	97.09	66.75	67.23	60.19	56.55	56.31	49.51	51.46	28.88	29.61	25.73
Data percentage	76.46	35.92	76.46	97.09	66.75	67.23	60.19	56.55	56.31	49.51	51.46	28.88	29.61	25.73
Minimum	34.17	1.33	90	2	1	1.9	1.5	1	1.33	0	1	1	1.31E+05	9.70E+05
Maximum	36.73	5.33	1829	254	3	206	107	2	444	96	76	29	9.41E+01	5.48E+01
Average	35.33	3.36	671.76	63.64	1.58	37.06	18.29	1.06	84.99	15.86	22.30	5.10	0.04	0.02
Standard deviation	0.51	0.88	218.56	36.90	0.50	26.75	15.49	0.23	88.51	15.17	9.13	3.67	0.12	0.06



Table C3.11 (8/8) Aquifer characteristics by district

Longitude (degree)		Latitude (degree)		Elevation (m)		Total No. of depth horizons (m)		Rock type		Water level struck (m)		rest Diameter (cm)		Pumping Number		Yield (l/min)		Drawdown (m)		Pumping hours (hours)		Recovery hours (hours)		Transmissivity (m <sup>2</sup> /min)		Storage coefficient	
<b>District code = 83 (Usain Gishu)</b>																											
Total number of boreholes = 132																											
Number of data																											
Data percentage																											
Minimum																											
Maximum																											
Average																											
Standard deviation																											
<b>District code = 84 (West Pokot)</b>																											
Total number of boreholes = 42																											
Number of data																											
Data percentage																											
Minimum																											
Maximum																											
Average																											
Standard deviation																											
<b>District code = 91 (Sungoma)</b>																											
Total number of boreholes = 176																											
Number of data																											
Data percentage																											
Minimum																											
Maximum																											
Average																											
Standard deviation																											
<b>District code = 92 (Busia)</b>																											
Total number of boreholes = 260																											
Number of data																											
Data percentage																											
Minimum																											
Maximum																											
Average																											
Standard deviation																											
<b>District code = 93 (Kakamega)</b>																											
Total number of boreholes = 333																											
Number of data																											
Data percentage																											
Minimum																											
Maximum																											
Average																											
Standard deviation																											
<b>District code = Unknown</b>																											
Total number of boreholes = 48																											
Number of data																											
Data percentage																											
Minimum																											
Maximum																											
Average																											
Standard deviation																											

Table C3.12 (1/11) Aquifer characteristics by basin

Drainage Basin	Elevation (m)	Total depth	Rock type	Water level Struck (m)	Rest (m)	Diameter (cm)	Yield (l/min)	Pumping test Drawdown (m)	Pumping hours (hour)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient
1A ( Total number of boreholes = 192 )											
Count	167	192	172	104	109	178	112	107	113	31	28
Data Percentage	87.0	100.0	89.6	54.2	56.8	92.7	58.3	55.7	58.9	16.1	14.6
Min	130.0	29.0	1.0	2.0	1.0	8.0	1.0	0.0	1.0	1.12E-04	7.38E-04
Max	2060.0	145.0	9.0	79.0	56.0	25.0	300.0	96.0	72.0	4.36E-02	5.91E-02
Average	1296.2	55.2	2.9	37.3	11.7	13.2	48.4	15.4	7.8	6.36E-03	1.67E-02
S. D.	269.3	16.3	2.4	15.1	10.1	3.5	56.5	14.3	10.4	1.06E-02	1.76E-02
1B ( Total number of boreholes = 100 )											
Count	98	100	100	90	88	87	87	45	81	9	9
Data Percentage	98.0	100.0	100.0	90.0	88.0	87.0	87.0	45.0	81.0	9.0	9.0
Min	506.0	9.0	1.0	3.0	0.0	10.0	1.0	1.0	1.0	1.97E-05	1.33E-04
Max	2300.0	195.0	4.0	176.0	55.0	22.0	504.0	113.6	72.0	1.56E-02	1.03E-01
Average	1173.9	67.7	1.7	44.3	18.5	14.4	56.2	27.1	11.2	3.40E-03	2.53E-02
S. D.	642.0	39.9	0.6	30.1	13.0	2.4	84.1	25.9	11.2	5.15E-03	3.40E-02
1C ( Total number of boreholes = 91 )											
Count	88	89	85	80	76	72	79	39	74	3	3
Data Percentage	96.7	97.8	93.4	87.9	83.5	79.1	86.8	42.9	81.3	3.3	3.3
Min	549.0	12.0	1.0	5.0	1.0	10.0	2.0	0.2	1.0	1.74E-05	1.55E-04
Max	2691.0	250.0	9.0	235.0	101.0	20.0	227.0	175.6	72.0	4.88E-03	2.11E-02
Average	1333.0	72.6	1.4	48.8	14.4	15.3	55.0	45.6	9.6	1.68E-03	7.39E-03
S. D.	820.7	47.9	1.1	39.9	16.5	1.4	57.9	41.9	10.2	2.77E-03	1.19E-02
1D ( Total number of boreholes = 127 )											
Count	105	127	111	101	91	120	61	57	65	21	20
Data Percentage	82.7	100.0	87.4	79.5	71.7	94.5	48.0	44.9	51.2	16.5	15.7
Min	430.0	23.0	1.0	3.0	1.0	8.0	5.0	1.0	0.3	3.66E-06	2.86E-04
Max	2090.0	150.0	9.0	102.0	34.0	25.0	227.0	114.3	65.0	6.86E-02	1.36E-01
Average	1362.9	50.6	2.2	33.7	9.4	15.2	63.0	22.2	8.5	9.20E-03	2.07E-02
S. D.	271.5	19.8	1.6	16.9	5.3	4.4	57.8	21.3	12.4	1.88E-02	3.12E-02
1E ( Total number of boreholes = 351 )											
Count	241	350	263	229	201	315	204	196	201	64	58
Data Percentage	68.7	99.7	74.9	65.2	57.3	89.7	58.1	55.8	57.3	18.2	16.5
Min	1158.0	22.0	1.0	4.0	1.0	7.0	3.0	1.0	0.3	3.21E-05	2.33E-04
Max	1690.0	200.0	9.0	120.0	59.0	25.0	279.0	120.2	36.0	7.12E-02	2.23E-01
Average	1361.1	52.1	2.9	35.3	13.7	14.8	66.2	15.8	5.8	8.49E-03	2.65E-02
S. D.	129.9	18.9	2.4	15.4	8.6	4.0	61.0	15.5	6.0	1.31E-02	4.43E-02

Table C3.12 (2/11) Aquifer characteristics by basin

Drainage Basin	Elevation (m)	Total depth	Rock type	Water level Struck (m)	Rest (m)	Diameter (cm)	Pumping test Yield (l/min)	Drawdown (m)	Pumping hours (hour)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient
1F ( Total number of boreholes = 19 )											
Count	18	19	17	12	14	14	15	11	16	2	2
Data percentage	94.7	100.0	89.5	63.2	73.7	73.7	78.9	57.9	84.2	10.5	10.5
Min	696.0	37.0	1.0	9.0	2.0	10.0	2.0	6.0	1.0	4.39E-04	2.17E-03
Max	2591.0	259.0	7.0	259.0	83.0	29.0	300.0	211.8	28.0	1.41E-02	5.58E-02
Average	1874.2	122.7	1.6	95.6	23.9	18.1	70.3	74.9	14.8	7.28E-03	2.90E-02
S. D.	591.4	70.2	1.5	89.6	24.3	5.5	76.8	70.6	9.2	9.67E-03	3.79E-02
1G ( Total number of boreholes = 129 )											
Count	125	128	114	111	105	109	106	79	98	26	25
Data percentage	96.9	99.2	88.4	86.0	81.4	84.5	82.2	61.2	76.0	20.2	19.4
Min	15.0	30.0	1.0	5.0	2.0	12.0	1.0	0.6	1.0	2.44E-05	1.43E-04
Max	2682.0	327.0	9.0	251.0	187.0	34.0	760.0	160.3	65.0	1.05E-01	1.12E-01
Average	1620.5	111.0	2.7	84.9	32.3	17.0	132.1	47.9	14.8	8.77E-03	1.17E-02
S. D.	507.1	56.2	3.0	53.1	33.1	3.4	133.2	38.1	12.1	2.44E-02	2.24E-02
1H ( Total number of boreholes = 210 )											
Count	192	203	160	155	151	161	155	136	153	56	55
Data percentage	91.4	96.7	76.2	73.8	71.9	76.7	73.8	64.8	72.9	26.7	26.2
Min	354.0	6.0	1.0	1.0	1.0	10.0	4.8	1.1	1.0	2.64E-05	2.36E-04
Max	1738.0	279.0	9.0	201.0	100.0	38.0	682.0	143.0	81.0	1.96E-01	4.66E-01
Average	1284.6	77.9	4.3	53.9	20.2	17.5	130.3	29.7	13.0	6.98E-03	2.17E-02
S. D.	171.5	36.5	3.3	34.4	16.1	6.1	146.1	27.0	14.9	2.67E-02	6.67E-02
1J ( Total number of boreholes = 94 )											
Count	33	34	34	24	27	29	25	7	23	3	2
Data percentage	35.1	36.2	36.2	25.5	28.7	30.9	26.6	7.4	24.5	3.2	2.1
Min	1128.0	46.0	1.0	21.0	4.0	15.0	5.0	1.0	1.0	1.26E-04	9.84E-04
Max	2800.0	244.0	9.0	223.0	163.0	20.0	500.0	45.7	86.0	2.20E-01	2.62E-02
Average	2039.9	152.9	2.4	115.7	71.8	15.9	141.2	19.6	20.8	7.60E-02	1.36E-02
S. D.	513.3	51.2	2.9	56.3	53.9	1.9	162.3	18.8	17.9	1.24E-01	1.78E-02
1K ( Total number of boreholes = 69 )											
Count	59	68	60	58	59	60	64	59	63	16	16
Data percentage	85.5	98.6	87.0	84.1	85.5	87.0	92.8	85.5	91.3	23.2	23.2
Min	1158.0	25.0	1.0	7.0	1.0	11.0	1.0	2.0	1.0	6.41E-05	5.04E-04
Max	1980.0	204.0	9.0	174.0	74.0	40.0	252.0	137.8	36.0	4.39E-03	2.17E-02
Average	1468.7	81.6	4.2	54.9	17.8	16.6	71.2	35.8	10.7	1.11E-03	5.29E-03
S. D.	208.0	36.3	3.5	33.3	16.7	4.3	68.5	23.4	8.5	1.46E-03	6.59E-03

Table C3-12 (3/11) Aquifer characteristics by basin

Drainage Basin	Elevation (m)	Total depth (m)	Rock type	Water level Struck (m)	Heat (m)	Diameter (cm)	Pumping test Yield (l/min)	Drawdown (m)	Pumping hours (hour)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient
<b>1L ( Total number of boreholes = 26 )</b>											
Count	25	25	24	21	21	23	21	9	18	2	2
Data percentage	96.2	96.2	92.3	80.8	80.8	88.5	80.8	34.6	69.2	7.7	7.7
Min	1500.0	52.0	1.0	9.0	4.0	15.0	3.0	4.0	3.0	4.88E-04	3.51E-03
Max	2819.0	289.0	9.0	280.0	233.0	34.0	212.0	114.0	38.0	9.77E-03	3.74E-02
Average	2289.8	153.2	1.6	126.9	70.5	16.3	95.0	38.9	14.8	5.13E-03	2.04E-02
S.D.	390.7	67.0	1.7	67.4	61.4	4.1	58.9	33.8	10.0	6.57E-03	2.40E-02
<b>2A ( Total number of boreholes = 50 )</b>											
Count	23	49	40	29	26	28	26	21	22	13	13
Data percentage	46.0	98.0	80.0	58.0	50.0	56.0	52.0	42.0	44.0	26.0	26.0
Min	360.0	8.0	1.0	6.0	2.0	11.0	3.0	2.0	3.0	1.31E-05	9.70E-05
Max	1000.0	145.0	4.0	118.0	56.0	27.0	200.0	42.0	25.0	5.55E-03	3.65E-02
Average	628.6	58.8	1.8	36.3	16.4	16.8	49.8	14.9	21.7	1.15E-03	6.90E-03
S.D.	181.9	20.1	1.1	25.5	13.8	4.3	48.7	11.1	5.8	1.46E-03	9.56E-03
<b>2B ( Total number of boreholes = 177 )</b>											
Count	85	174	130	139	116	144	80	78	79	65	62
Data percentage	48.0	98.3	73.4	78.5	66.7	81.4	45.2	44.1	44.6	36.7	35.0
Min	300.0	2.0	1.0	3.0	2.0	8.0	1.0	0.0	1.0	6.62E-05	2.00E-04
Max	2280.0	201.0	9.0	206.0	59.0	35.0	289.0	182.0	30.0	4.88E-01	5.48E-01
Average	1122.5	54.4	2.2	35.0	14.5	15.7	62.7	15.6	18.2	1.04E-02	2.15E-02
S.D.	470.8	27.7	1.6	24.7	11.1	5.3	70.3	23.6	8.3	6.56E-02	7.00E-02
<b>2C ( Total number of boreholes = 50 )</b>											
Count	32	50	43	42	40	41	33	24	28	18	16
Data percentage	64.0	100.0	85.0	84.0	80.0	82.0	66.0	48.0	56.0	36.0	32.0
Min	90.0	12.0	1.0	3.0	1.5	11.0	3.0	1.0	2.0	3.43E-04	1.95E-03
Max	2490.0	195.0	7.0	132.0	85.0	80.0	286.0	48.0	54.0	3.53E-01	8.09E-02
Average	840.1	65.6	2.6	38.2	21.7	20.0	79.4	13.7	21.1	3.62E-02	2.17E-02
S.D.	361.9	46.1	1.8	31.0	23.2	10.4	72.6	12.5	10.9	9.08E-02	2.10E-02
<b>2D ( Total number of boreholes = 25 )</b>											
Count	23	24	25	24	24	23	23	16	21	9	9
Data percentage	92.0	96.0	100.0	96.0	96.0	92.0	92.0	64.0	84.0	36.0	36.0
Min	570.0	20.0	1.0	17.0	6.0	10.0	11.0	1.0	2.0	5.16E-05	3.71E-04
Max	1981.0	183.0	8.0	174.0	110.0	20.0	500.0	129.2	99.0	1.37E-03	6.87E-03
Average	1218.4	106.6	2.0	72.7	40.1	16.0	96.7	36.7	27.4	6.95E-04	3.31E-03
S.D.	450.8	48.1	1.9	43.0	30.9	2.5	104.7	39.1	19.8	4.39E-04	2.17E-03

Table C3.12 (4/11) Aquifer characteristics by basin

Drainage Basin	Elevation (m)	Total depth (m)	Rock type	Water level Struck (m)	Rest (m)	Diameter (cm)	Pumping test Yield (l/min)	Drawdown (m)	Pumping hours (hour)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient
<b>2E ( Total number of boreholes = 271 )</b>											
Count	258	270	267	239	230	232	238	100	235	11	11
Data percentage	95.2	99.6	98.5	88.2	84.9	85.6	87.8	36.9	86.7	4.1	4.1
Min	266.0	19.0	1.0	3.0	2.0	10.0	1.0	0.5	1.0	2.78E-04	1.40E-03
Max	3120.0	412.0	9.0	251.0	220.0	25.0	455.0	197.0	99.0	4.88E-02	3.30E-01
Average	2027.7	141.1	1.2	112.8	65.6	16.3	127.2	33.6	17.0	8.01E-03	5.90E-02
S. D.	352.6	56.6	0.8	53.7	50.6	2.6	85.0	31.5	13.5	1.51E-02	1.09E-01
<b>2F ( Total number of boreholes = 200 )</b>											
Count	184	200	198	177	179	189	180	71	175	13	11
Data percentage	92.0	100.0	99.0	88.5	89.5	94.5	90.0	35.5	87.5	6.5	6.5
Min	914.0	40.0	1.0	14.0	2.0	13.0	6.0	0.2	1.0	2.03E-04	1.40E-03
Max	2865.0	312.0	9.0	259.0	235.0	40.0	450.0	101.8	99.0	3.66E-01	8.24E-01
Average	2029.3	148.2	1.5	125.4	79.4	16.2	140.4	31.9	18.2	7.09E-02	9.95E-02
S. D.	220.3	51.4	1.7	50.3	45.1	3.3	82.9	25.1	15.6	1.26E-01	2.43E-01
<b>2G ( Total number of boreholes = 274 )</b>											
Count	267	270	270	238	232	233	230	101	211	13	13
Data percentage	97.4	98.5	98.5	86.9	84.7	85.0	83.9	36.9	77.0	4.7	4.7
Min	250.0	13.0	1.0	2.0	1.0	10.0	2.0	0.1	1.0	3.15E-05	1.85E-04
Max	2793.0	939.0	9.0	290.0	287.0	33.0	690.0	88.4	90.0	1.92E-01	6.11E-01
Average	2173.7	115.6	1.3	87.6	62.5	17.4	148.0	19.3	13.5	2.80E-02	8.42E-02
S. D.	309.9	86.9	1.1	69.0	62.4	4.2	140.5	20.0	9.8	5.93E-02	1.75E-01
<b>2H ( Total number of boreholes = 72 )</b>											
Count	66	70	72	50	48	56	46	28	48	4	4
Data percentage	91.7	97.2	100.0	69.4	66.7	77.8	63.9	38.9	66.7	5.6	5.6
Min	860.0	49.0	1.0	14.0	9.0	8.0	1.0	1.0	1.0	1.94E-04	1.66E-03
Max	2636.0	325.0	9.0	274.0	264.0	25.0	620.0	107.0	56.0	2.26E-02	1.36E-01
Average	1812.6	171.1	1.5	122.9	90.6	16.6	118.4	35.4	19.2	6.30E-03	3.81E-02
S. D.	373.3	62.7	1.2	69.1	71.1	3.4	139.4	27.7	13.1	1.03E-02	6.56E-02
<b>2J ( Total number of boreholes = 113 )</b>											
Count	36	107	72	61	52	66	52	46	51	30	26
Data percentage	31.9	94.7	63.7	54.0	46.0	58.4	46.0	40.7	45.1	26.5	23.0
Min	366.0	6.0	1.0	2.0	2.0	11.0	4.0	1.0	3.0	1.61E-05	1.12E-04
Max	1000.0	254.0	9.0	130.0	61.0	40.0	300.0	59.0	30.0	3.95E-01	8.49E-02
Average	696.9	70.8	2.2	39.4	20.6	19.3	73.4	15.7	21.8	1.83E-02	1.53E-02
S. D.	142.4	39.1	2.1	25.5	15.5	5.2	68.9	12.0	6.4	7.19E-02	2.18E-02

Table C3.12 (5/11) Aquifer characteristics by basin

Drainage Basin	Elevation (m)	Total depth	Rock type	Water level Struck (m)	Rest (m)	Diameter (cm)	Pumping test Yield (l/min)	Drawdown (m)	Pumping hours (hour)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient
<b>2K ( Total number of boreholes = 22 )</b>											
Count	22	22	22	15	16	18	15	12	14	3	3
Data Percentage	100.0	100.0	100.0	68.2	72.7	81.8	68.2	54.5	63.6	13.6	13.6
Min	1650.0	76.0	1.0	49.0	8.0	15.0	6.0	0.1	2.0	6.86E-04	3.86E-03
Max	2987.0	305.0	9.0	244.0	214.0	20.0	150.0	65.0	24.0	6.69E-03	3.41E-02
Average	2473.8	162.0	1.9	125.3	81.6	16.1	91.6	28.3	14.2	3.38E-03	1.71E-02
S. D.	486.9	53.4	2.4	47.9	61.1	2.1	48.0	23.6	8.1	3.05E-03	1.55E-02
<b>3A ( Total number of boreholes = 448 )</b>											
Count	420	444	447	415	416	414	416	202	394	46	46
Data Percentage	93.8	99.1	98.4	92.6	92.9	92.4	92.9	45.1	87.9	10.7	10.3
Min	12.0	17.0	1.0	6.0	1.0	7.0	1.0	1.0	1.0	4.56E-05	3.68E-04
Max	2301.0	372.0	9.0	338.0	204.0	200.0	766.0	176.2	99.0	5.03E-01	3.61E-01
Average	1599.8	131.6	1.5	100.2	51.1	17.0	105.0	37.7	18.4	2.54E-02	2.58E-02
S. D.	202.2	59.6	1.1	57.9	32.6	9.9	106.0	32.9	14.5	1.01E-01	6.15E-02
<b>3B ( Total number of boreholes = 1158 )</b>											
Count	1097	1148	1151	1110	1110	1098	1125	516	1072	95	92
Data Percentage	94.7	99.1	99.4	95.9	95.9	94.8	97.2	44.6	92.6	8.2	7.9
Min	152.0	12.0	1.0	2.0	1.0	3.0	1.0	0.6	1.0	1.89E-05	1.88E-04
Max	2715.0	473.0	9.0	420.0	205.0	152.0	826.0	141.5	99.0	6.10E-01	4.29E-01
Average	1784.1	135.0	1.1	101.2	47.7	16.8	136.7	40.1	17.2	1.43E-02	3.01E-02
S. D.	240.1	57.7	0.8	54.7	31.5	5.4	109.2	32.9	12.8	6.39E-02	6.13E-02
<b>3C ( Total number of boreholes = 52 )</b>											
Count	46	51	51	51	48	50	46	24	46	5	5
Data Percentage	88.5	96.1	96.1	98.1	92.3	96.2	88.5	46.2	88.5	9.6	9.6
Min	1447.0	63.0	1.0	22.0	8.0	10.0	5.0	3.0	1.0	1.83E-04	9.06E-04
Max	1950.0	245.0	1.0	229.0	126.0	25.0	471.0	190.0	30.0	4.18E-03	1.60E-02
Average	1564.5	143.2	1.0	105.8	46.9	17.1	136.6	44.9	15.5	1.33E-03	5.96E-03
S. D.	108.3	48.2	0.0	50.9	24.6	3.2	125.6	44.8	7.7	1.64E-03	5.88E-03
<b>3D ( Total number of boreholes = 26 )</b>											
Count	25	24	26	25	24	26	26	18	26	0	0
Data Percentage	96.2	92.3	100.0	96.2	92.3	100.0	100.0	69.2	100.0	0.0	0.0
Min	1219.0	35.0	1.0	3.0	2.0	15.0	1.0	3.0	1.0		
Max	2024.0	153.0	6.0	128.0	76.0	25.0	606.0	90.0	61.0		
Average	1396.4	103.0	1.9	73.8	29.3	16.7	113.2	42.1	19.9		
S. D.	164.7	31.9	1.2	32.9	20.7	2.8	134.4	27.6	13.4		

Table C3.12 (8/11) Aquifer characteristics by basin

Drainage Basin	Elevation (m)	Total depth	Rock type	Water level Struck (m)	Rest (m)	Diameter (cm)	Pumping test Yield (l/min)	Drawdown (m)	Pumping hours (hour)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient
<b>4B ( Total number of boreholes = 76 )</b>											
Count	75	76	76	74	67	66	72	40	69	4	4
Data Percentage	97.4	98.7	98.7	96.1	87.0	85.7	93.5	51.9	89.6	5.2	5.2
Min	1052.0	15.0	1.0	3.0	1.0	15.0	2.0	5.6	1.0	8.32E-05	6.05E-04
Max	2790.0	250.0	9.0	213.0	85.0	25.0	455.0	193.0	48.0	5.63E-04	3.04E-03
Average	1426.3	99.2	1.8	61.4	16.0	17.1	86.4	55.3	16.6	2.29E-04	1.46E-03
S. D.	233.6	53.8	1.5	46.8	16.9	3.1	96.5	44.2	11.0	2.25E-04	1.14E-03
<b>4C ( Total number of boreholes = 122 )</b>											
Count	120	122	122	116	115	117	116	46	115	4	4
Data Percentage	98.4	100.0	100.0	95.1	94.3	95.9	95.1	37.7	94.3	3.3	3.3
Min	1058.0	27.0	1.0	18.0	2.0	15.0	1.0	5.0	1.0	3.56E-04	2.92E-03
Max	2652.0	277.0	9.0	264.0	189.0	25.0	945.0	120.0	78.0	8.54E-02	3.01E-01
Average	1641.8	122.8	1.3	97.4	43.0	16.4	124.3	53.0	16.0	2.30E-02	8.05E-02
S. D.	405.1	50.4	1.2	49.2	31.5	2.7	116.8	34.8	12.1	4.17E-02	1.47E-01
<b>4D ( Total number of boreholes = 15 )</b>											
Count	14	14	14	12	13	13	12	8	12	0	0
Data Percentage	93.3	93.3	93.3	80.0	86.7	86.7	80.0	53.3	80.0	0.0	0.0
Min	450.0	34.0	1.0	29.0	9.0	10.0	4.0	9.1	6.0		
Max	1765.0	200.0	2.0	111.0	80.0	20.0	270.0	139.1	55.0		
Average	1241.9	112.9	1.9	69.8	29.1	15.4	71.8	78.9	24.3		
S. D.	305.4	52.2	0.4	28.9	19.1	2.5	86.0	42.9	14.7		
<b>4E ( Total number of boreholes = 30 )</b>											
Count	29	29	29	25	27	27	27	17	25	4	4
Data Percentage	96.7	96.7	96.7	83.3	90.0	90.0	90.0	56.7	83.3	13.3	13.3
Min	396.0	22.0	1.0	18.0	1.0	15.0	2.0	2.0	1.0	1.23E-04	8.13E-04
Max	2060.0	201.0	4.0	186.0	108.0	20.0	275.0	94.0	51.0	2.93E-03	1.56E-02
Average	1208.3	110.0	1.6	88.4	42.3	15.9	64.6	48.5	19.1	1.53E-03	6.50E-03
S. D.	294.9	42.9	0.7	41.5	28.7	2.0	64.4	31.6	11.3	1.43E-03	6.71E-03
<b>4F ( Total number of boreholes = 58 )</b>											
Count	49	49	56	50	46	53	41	21	41	8	8
Data Percentage	84.5	84.5	96.6	85.2	79.3	91.4	70.7	36.2	70.7	13.8	13.8
Min	230.0	11.0	1.0	7.0	3.0	10.0	2.0	1.0	2.0	4.18E-05	3.58E-04
Max	1900.0	180.0	9.0	156.0	118.0	35.0	252.0	84.0	24.0	2.17E-03	1.19E-02
Average	1003.4	63.3	1.8	50.4	34.4	15.8	105.5	17.0	16.2	7.66E-04	4.46E-03
S. D.	638.9	39.0	1.7	35.0	23.9	6.6	52.9	18.7	9.0	7.26E-04	3.98E-03

Table C3.12 (9/11) Aquifer characteristics by basin

Drainage Basin	Elevation (m)	Total depth	Rock type	Water level Struck (m)	Rest (m)	Diameter (cm)	Yield (l/min)	Drawdown (m)	Pumping (hour)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient
4G ( Total number of boreholes = 43 )											
Count	42	43	41	33	38	36	33	17	32	6	6
Data percentage	97.7	100.0	95.3	76.7	88.4	83.7	76.7	39.5	74.4	14.0	14.0
Min	23.0	18.0	1.0	3.0	3.0	10.0	6.0	0.1	1.0	1.63E-04	9.68E-04
Max	1920.0	174.0	8.0	148.0	130.0	35.0	619.0	76.0	68.0	3.49E-02	1.46E-01
Average	670.5	91.7	2.6	56.9	39.0	18.8	104.8	23.9	17.7	7.07E-03	2.94E-02
S. D.	519.6	45.4	1.6	46.6	33.7	7.0	116.7	24.3	14.0	1.37E-02	5.73E-02
4H ( Total number of boreholes = 41 )											
Count	40	40	41	33	31	34	34	15	29	0	0
Data percentage	97.6	97.6	100.0	80.5	75.6	82.9	82.9	36.6	70.7	0.0	0.0
Min	180.0	15.0	1.0	3.0	1.0	5.0	1.0	6.0	1.0	0.0	0.0
Max	1737.0	172.0	5.0	150.0	140.0	25.0	342.0	132.1	72.0	0.0	0.0
Average	1013.5	92.4	2.2	54.7	33.5	15.8	60.5	46.9	24.8	0.0	0.0
S. D.	312.7	36.5	0.7	35.2	32.0	3.4	72.1	38.3	17.4	0.0	0.0
4J ( Total number of boreholes = 18 )											
Count	18	18	18	12	14	14	10	3	11	0	0
Data percentage	100.0	100.0	100.0	66.7	77.8	77.8	55.6	16.7	61.1	0.0	0.0
Min	30.0	57.0	2.0	35.0	17.0	12.0	12.0	2.1	2.0	0.0	0.0
Max	2640.0	232.0	3.0	185.0	219.0	23.0	68.0	25.0	48.0	0.0	0.0
Average	259.2	134.5	2.9	117.3	104.1	15.4	47.4	10.6	20.9	0.0	0.0
S. D.	597.2	54.1	0.3	48.6	52.2	3.4	17.5	12.6	13.8	0.0	0.0
4K ( Total number of boreholes = 26 )											
Count	24	26	24	16	18	18	17	7	14	4	4
Data percentage	92.3	100.0	92.3	61.5	69.2	69.2	65.4	26.9	53.8	15.4	15.4
Min	11.0	9.0	2.0	4.0	4.0	10.0	27.0	1.4	4.0	6.38E-04	3.65E-03
Max	610.0	232.0	3.0	172.0	168.0	20.0	600.0	20.9	24.0	4.59E-02	9.33E-02
Average	117.5	86.9	2.7	61.6	57.5	14.7	115.2	9.3	16.2	1.33E-02	3.08E-02
S. D.	129.4	58.1	0.5	58.2	53.2	2.6	147.3	8.0	7.5	2.18E-02	4.21E-02
5A ( Total number of boreholes = 106 )											
Count	102	104	100	82	82	81	92	44	82	6	6
Data percentage	96.2	98.1	94.3	77.4	77.4	76.4	86.8	41.5	77.4	6.7	5.7
Min	570.0	6.0	1.0	1.0	1.0	15.0	1.0	2.2	1.0	5.46E-05	3.74E-04
Max	2941.0	308.0	9.0	307.0	201.0	90.0	455.0	149.3	63.0	7.12E-03	3.33E-02
Average	2172.9	122.0	1.1	106.1	49.3	16.5	85.1	53.2	14.4	1.73E-03	6.64E-03
S. D.	365.6	65.0	0.8	62.8	36.3	8.4	73.3	37.2	9.9	2.69E-03	1.24E-02



Table C3.12 (10/11) Aquifer characteristics by basin

Drainage Basin	Elevation (m)	Total depth	Rock type	Water level Struck (m)	Rest (m)	Diameter (cm)	Pumping test Yield (l/min)	Drawdown (m)	Pumping hours (hour)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient
SB ( Total number of boreholes = 108 )											
Count	106	108	107	92	91	93	98	33	94	4	4
Data percentage	98.1	100.0	99.1	85.2	84.3	86.1	90.7	30.6	87.0	3.7	3.7
Min	914.0	19.0	1.0	7.0	2.0	13.0	2.0	2.0	2.0	1.54E-04	1.19E-03
Max	2255.0	283.0	6.0	277.0	90.0	25.0	272.0	204.2	52.0	2.09E-03	8.45E-03
Average	1888.6	107.2	1.3	89.7	40.2	15.6	91.5	57.3	12.7	7.84E-04	4.05E-03
S. D.	167.1	53.3	0.7	50.2	21.0	2.0	73.3	49.9	9.0	9.05E-04	3.44E-03
SC ( Total number of boreholes = 46 )											
Count	44	46	45	44	43	43	39	24	31	6	6
Data percentage	95.7	100.0	97.8	95.7	93.5	93.5	84.8	52.2	67.4	13.0	13.0
Min	229.0	40.0	1.0	16.0	5.0	13.0	2.0	2.0	1.0	6.18E-05	4.76E-04
Max	2134.0	285.0	5.0	263.0	146.0	63.0	236.0	146.0	99.0	6.73E-02	5.45E-02
Average	1714.8	138.3	1.4	100.8	45.8	16.7	88.7	63.0	19.3	1.19E-02	1.19E-02
S. D.	447.9	60.9	0.8	61.8	30.7	7.6	70.0	44.6	18.2	2.71E-02	2.12E-02
SD ( Total number of boreholes = 107 )											
Count	100	105	104	86	84	86	84	37	78	5	5
Data percentage	93.5	98.1	97.2	80.4	78.5	80.4	78.5	34.6	72.9	4.7	4.7
Min	19.0	19.0	1.0	1.0	3.0	10.0	2.0	1.0	1.0	2.72E-05	2.37E-04
Max	2804.0	318.0	9.0	207.0	151.0	25.0	677.0	121.9	99.0	1.80E-02	3.10E-02
Average	1708.4	104.9	1.8	75.0	37.6	15.8	83.6	52.0	17.0	7.08E-03	1.18E-02
S. D.	473.5	48.0	1.1	40.4	25.7	2.4	102.2	35.3	15.8	9.24E-03	1.36E-02
SE ( Total number of boreholes = 144 )											
Count	140	141	141	103	103	116	109	68	91	15	15
Data percentage	97.2	97.9	97.9	71.5	71.5	80.6	75.7	47.2	63.2	10.4	10.4
Min	30.0	9.0	1.0	2.0	1.0	14.0	1.0	0.3	1.0	4.71E-05	3.42E-04
Max	1960.0	292.0	9.0	263.0	247.0	30.0	455.0	211.8	99.0	4.71E-02	2.11E-01
Average	681.4	97.0	2.8	74.0	53.3	17.4	66.9	27.8	23.1	7.84E-03	2.51E-02
S. D.	402.5	67.1	1.7	62.0	54.3	3.6	80.6	39.1	20.5	1.48E-02	5.65E-02
SF ( Total number of boreholes = 75 )											
Count	71	73	74	56	59	62	60	42	56	13	13
Data percentage	94.7	97.3	98.7	74.7	78.7	82.7	80.0	56.0	74.7	17.3	17.3
Min	99.0	11.0	1.0	3.0	2.0	11.0	1.0	0.8	1.0	1.46E-04	1.18E-03
Max	2000.0	220.0	8.0	192.0	163.0	25.0	800.0	312.0	48.0	5.85E-03	5.28E-02
Average	402.7	113.0	2.9	104.3	88.4	16.0	126.2	18.3	23.8	2.27E-03	1.13E-02
S. D.	464.0	55.6	1.1	47.4	46.3	2.8	145.3	47.7	11.5	1.93E-03	1.39E-02

Table C3.12 (11/11) Aquifer characteristics by basin

Drainage Basin	Elevation (m)	Total depth (m)	Rock type	Water level Struck (m)	Rest level (m)	Diameter (cm)	Pumping test Yield (l/min)	Drawdown (m)	Pumping hours (hour)	Transmissivity (m <sup>2</sup> /min)	Storage coefficient
SG ( Total number of boreholes = 26 )											
Count	14	16	16	15	15	12	14	5	8	3	3
Data percentage	53.8	61.5	61.5	57.7	57.7	46.2	53.8	19.2	30.8	11.5	11.5
Min	122.0	46.0	2.0	35.0	16.0	10.0	1.0	1.0	1.0	1.26E-04	8.56E-04
Max	792.0	244.0	5.0	183.0	144.0	20.0	160.0	119.0	48.0	7.53E-02	1.94E-01
Average	529.1	116.5	2.8	69.1	58.2	16.1	47.6	40.6	20.9	2.52E-02	6.52E-02
S. D.	165.6	51.7	0.8	38.4	31.9	3.2	43.3	47.3	14.7	4.34E-02	1.11E-01
SH ( Total number of boreholes = 1 )											
Count	1	1	1	1	1	1	1	0	0	1	1
Data percentage	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0
Min	610.0	89.0	3.0	53.0	43.0	15.0	48.0	0.0	0.0	5.65E-04	3.16E-03
Max	610.0	89.0	3.0	53.0	43.0	15.0	48.0	0.0	0.0	5.65E-04	3.16E-03
Average	610.0	89.0	3.0	53.0	43.0	15.0	48.0	0.0	0.0	5.65E-04	3.16E-03
S. D.											
SJ ( Total number of boreholes = 34 )											
Count	29	32	34	24	24	28	16	14	11	5	5
Data percentage	85.3	94.1	100.0	70.6	70.6	82.4	47.1	41.2	32.4	14.7	14.7
Min	385.0	13.0	1.0	2.0	0.3	15.0	1.0	1.3	6.0	1.25E-04	1.01E-03
Max	1820.0	260.0	9.0	155.0	114.0	25.0	240.0	69.0	32.0	1.04E-01	5.72E-01
Average	660.9	90.5	2.4	47.6	31.0	17.9	88.3	31.1	21.5	3.64E-02	1.46E-01
S. D.	321.8	69.2	1.9	40.5	34.0	3.6	74.4	21.4	8.0	4.94E-02	2.45E-01
Unknown ( Total number of boreholes = 363 )											
Count	123	337	292	250	238	293	217	191	209	40	32
Data percentage	33.9	92.8	80.4	68.9	65.6	80.7	59.8	52.6	57.6	11.0	8.8
Min	6.0	3.0	1.0	3.0	1.0	10.0	1.0	0.6	1.0	4.88E-05	4.03E-04
Max	2485.0	302.0	9.0	270.0	179.0	200.0	471.0	155.0	48.0	1.85E+00	4.20E-01
Average	1173.0	86.5	2.6	61.2	31.1	18.9	94.1	26.1	19.2	1.10E-01	4.15E-02
S. D.	541.9	62.0	2.4	54.5	33.5	12.0	90.7	26.5	9.5	3.28E-01	8.36E-02

Table C3.13 Guidelines for interpretation of water quality for irrigation

Irrigation problem	Degree of problem		
	No problem	Increasing problem	Severe problem
1. Salinity (affects crop water availability) EC <sub>w</sub> (mmhos/cm)	< 0.75	0.75 - 3.0	> 3.0
2. Permeability (affects infiltration rate into soil) EC <sub>w</sub> (m S/cm)	> 0.5	0.5 - 0.2	< 0.2
Adj.SAR * / ** /			
Montmorillonite (2:1 crystal lattice)	< 6	6 - 9 ***	> 9
Illite-Vermiculite (2:1 crystal lattice)	< 8	8 - 16 ***	> 16
Kaolinite-sesquioxides (1:1 crystal lattice)	< 16	16 - 24 ***	> 24
3. Specific ion toxicity (affects sensitive crops)			
Sodium **** / ***** / (adj.SAR)	< 3	3 - 9	> 9
Chloride **** / ***** / (meq/l)	< 4	4 - 10	> 10
Boron (mg/l)	< 0.75	0.75 - 2.0	> 2.0
4. Miscellaneous effects (affects susceptible crops)			
NO <sub>3</sub> -N (or NH <sub>4</sub> -N (mg/l)	< 5	5 - 30	> 30
HCO <sub>3</sub> (meq/l) [overhead sprinkling]	< 1.5	1.5 - 8.5	> 8.5
pH		[ Normal range 6.5 - 8.4 ]	

\* Adj.SAR means adjusted Sodium Adsorption Ratio and can be calculated using the procedure  
 \*\* Values presented are for the dominant type of clay mineral in the soil since structural stability  
 varies between the various clay types (Rallings, 1966, and Rhoades, 1975).  
 Problems are less likely to develop if water salinity is high; more likely to develop if water salinity is low  
 \*\*\* Use the lower range if EC<sub>w</sub> < 4 mmhos/cm;  
 Use the intermediate range if EC<sub>w</sub> = 0.4 - 1.6 mmhos/cm;  
 Use upper limit if EC<sub>w</sub> > 1.6 mmhos/cm  
 \*\*\*\* Most tree crops and woody ornamentals are sensitive to sodium and chloride.  
 \*\*\*\*\* Most annual crops are not sensitive (use the salinity tolerance tables).  
 With sprinkler irrigation on sensitive crops, sodium or chloride in excess of 3 meq/l under  
 certain conditions has resulted in excessive leaf absorption and crop damage.

< means less than  
 > means more than

**Table C3.14 Recommended maximum concentrations of trace elements in irrigation**

	Element	For waters used continuously on all soils [ mg/l ]	For use up to 20 years on fine textured soils of PH 6.0 to 8.5 [ mg/l ]
1.	Aluminum	5	20
2.	Arsenic	0.1	2
3.	Beryllium	0.1	0.5
4.	Boron	0.75	2
5.	Cadmium	0.01	0.05
6.	Chromium	0.1	1
7.	Cobalt	0.05	5
8.	Copper	0.2	5
9.	Fluoride	1	15
10.	Iron	5	20
11.	Lead	5	10
12.	Lithium	2.5**	2.5**
13.	Manganese	0.2	10
14.	Molybdenum	0.01	0.050**
15.	Nickel	0.2	2
16.	Selenium	0.02	0.02
17.	Tin**		
18.	Titanium***		
19.	Tungsten****		
20.	Vanadium	0.1	1
21.	Zinc	2	10

\* These levels will normally not adversely affect plants or soils.

\*\* Recommended maximum concentration for irrigating citrus is 0.075 mg/

\*\*\* See Water Quality Criteria, EPA Publication R.3-73-033, 1972, pp. 337-353, for a discussion of these elements.

\*\*\*\* For only fine textured soils or acid soils with relatively high iron oxide contents

Table C4.1 Out-patient Morbidity of Infective Diseases in Relation to Water Supplies : 1985-89 Average

Code	District	Total population in 1990	Number of institutions	Diarhoeal Diseases	Leprosy	Infectious Hepatitis	Bilharzia	Eye Infections	Total of left 5 Diseases	Percentage of left 5 diseases in terms of total population
110	Nairobi	1,413,100	0	6,650	72	76	268	4,903	14,248	1.01
210	Kiambu	971,910	56	31,214	16	2,590	2,090	17,774	53,684	5.52
220	Kirinyga	412,882	40	36,796	98	2,934	5,198	21,568	68,614	16.62
230	Muranga	698,776	53	30,720	16	149	316	30,721	61,923	8.89
240	Nyandarua	378,008	25	13,576	2	43	10	10,304	23,934	6.33
250	Nyeri	647,296	59	32,271	49	911	593	21,785	55,550	8.58
310	Kilifi	654,103	54	54,663	44	782	14,767	21,242	91,696	14.02
320	Kwale	406,905	36	19,365	46	482	12,236	10,134	42,267	10.34
330	Lamu	60,538	21	10,735	11	84	2,727	4,699	18,256	30.16
340	Mombasa	479,600	64	21,336	16	359	1,241	11,681	34,632	7.26
350	Taita Taveta	315,200	36	15,847	40	152	1,714	12,797	30,549	14.20
360	Tana River	137,903	30	13,861	7	80	7,923	6,762	28,632	20.76
410	Embu	381,891	41	16,856	11	88	173	15,090	32,216	8.44
420	Isiolo	74,782	20	4,145	0	14	43	6,195	10,397	13.90
430	Kitui	683,867	44	36,050	22	567	3,383	16,229	59,041	8.63
440	Machakos/Makueni	1,486,232	70	58,185	30	528	5,303	25,490	89,536	6.02
450	Maraabit	138,105	15	5,458	4	88	183	2,721	6,455	6.12
460	Meru	1,213,445	89	33,175	26	797	1,450	34,076	69,524	5.73
510	Garissa	127,191	16	5,617	38	63	2,164	4,128	12,009	9.44
520	Mandera	127,343	7	3,894	3	14	45	2,150	6,706	4.80
530	Wajir	125,980	10	1,938	2	10	29	1,245	3,224	2.56
610	Kisii/Nyamira	1,201,873	73	19,558	63	731	3,016	41,219	64,607	5.38
620	Kisumu	708,224	57	49,285	99	371	1,756	20,305	71,816	10.14
630	Siaya	676,760	40	46,067	234	502	1,090	19,421	65,112	10.06
640	South Nyanza	1,154,938	66	47,319	126	717	4,684	25,303	78,350	6.78
710	Kajiado	286,370	39	5,980	2	62	359	3,391	9,794	3.42
720	Kericho	915,560	80	26,071	22	674	1,366	17,379	45,534	4.97
730	Lakipia	228,199	35	11,182	3	63	276	6,537	18,001	7.89
740	Nakuru	932,656	72	24,499	18	1,279	219	10,945	36,951	3.96
750	Narok	424,599	61	12,389	6	64	503	7,414	20,395	4.80
760	Trans Nzoia	424,119	37	32,544	48	368	1,621	10,010	44,611	10.52
770	Uasin Gishu	470,325	46	22,620	12	217	454	11,703	35,006	7.44
810	Baringo	305,959	48	7,806	9	122	471	5,789	14,077	4.60
820	Eldaya Marakwet	227,291	42	11,011	11	48	285	4,665	16,019	7.05
830	Nandi	473,324	64	24,444	16	114	693	12,347	37,604	7.94
840	Samburu	122,267	38	8,028	1	382	276	6,233	14,920	12.20
850	Turkana	189,427	39	12,128	7	108	163	10,631	23,037	12.16
860	West Pokot	248,101	29	19,547	11	107	330	14,777	34,772	14.02
910	Bungoma	789,067	30	23,624	32	189	460	9,694	35,968	4.56
920	Buena	453,619	20	9,383	10	62	160	2,838	12,423	2.74
930	Kakamega/Vihiga	1,479,171	61	67,093	44	245	301	16,608	86,491	5.85
Total		22,749,122	1,769	942,750	1,347	17,244	80,473	541,393	1,583,207	6.63
Average		554,857	43	22,994	33	421	1,963	13,205	36,616	

Source : Medical Information System, MOH  
 Remark : \* Schistosomiasis

Table CS.1 Cost of drilling

	Unit	Rate (Ksh)	Remarks
1. Mobilization and demobilization	km	105	Nairobi to the camp and the camp to Nairobi
2. Shifting from site to site	LS	1500	
3. Erecting and dismantling	LS	1500	
4. Drilling	m	800	
5. Supply and insert casing and screen			
1. Casing	m	1850	For more than 100 meters
Steel	m	800	Upto 100 meters
PVC	m	2500	20 meters long
2. Screen	m	1000	10 meters long
Steel			
PVC			
6. Supply and insert cement and clay	m <sup>3</sup>	700	0 to 1 meter for cement, 1 to 4 meters for clay
7. Supply and insert filter gravel pack	m <sup>3</sup>	3000	4 meters to the bottom
8. Development work (for 12 hrs)	LS	6000	Surging, boiling, cleaning, etc.
9. Pumping test	hr	600	Step drawdown (4 hrs, 4 steps)
upto 24 hrs	hr	400	Constant pumping 24 hrs, recovery 12 hrs
more than 24 hrs			
10. Prepare well head	LS	2500	
11. Supply of water	LS	3000	Well cap, serial No. and cement plate

**Table C5.2 Economic lifetime years and annual maintenance costs as percentage of construction cost**

Water Supply Component	Economic Lifetime Years	Annual Maintenance Costs in %
1 Dams	40	0.5
2 Intake works, including boreholes: Mass concrete structures, such as intakes, underground pits, culverts, etc.	40	1
3 Earthworks generally	40	1
4 Boreholes and wells	40	1
5 Pumps:		
Hydrants and Hydrostats	15	5
Other pumps	10	5
6 Power		
Diesel Engines	10	5
Engine and pump sets petrol paraffin	5	5
Electric motors, cables and switch gears	10	5
7 Piping:		
All types	30	1
8 Treatment Works:		
Treatment works in masonry or reinforced concrete	30	1
9 Reservoirs:		
Storage tanks in masonry or reinforced concrete	30	1
Storage tanks, sectional steel including towers	20	2
Storage tanks, corrugated galvanized steel (C.G.S.) on timber stands	10	2
10 Building:		
Building C.G.S. on timber	20	1
Building, masonry	30	1
11 Miscellaneous structures and items: Communal water points (CWP)	10	5
Water kiosks, latrines, licensed retailer points etc.	20	2
Gantries, steelwork etc.	20	2
Permanent tools and plant not mentioned elsewhere	10	2
Water meters	10	5
12 Chemical Apparatus:		
Chemical dosing gear	10	5
Instruments and testing apparatus	5	5
13 Roads, fences etc.		
Roads of access, general	30	1
Fences, G.S. wire or mesh on timber	10	1
Fences, G.S. wire or mesh on concrete posts	20	1

Source: MoWD, Design Manual, 1986

Table CS-3 (1/10) Average cost per cubic meters of groundwater by the year 2010

Location	(Unit : US\$/m <sup>3</sup> )				Location	(Unit : US\$/m <sup>3</sup> )			
	Diesel+B/H	Electric+B/H	Hand+B/H	Solar+B/H		Wind+B/H	Hand+B/H	Solar+B/H	Electric+B/H
211.1	0.4820	0.2867	0.2838	0.6537	0.4495	0.1238	0.1238	0.5635	0.1238
211.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.1238	0.4344	0.5635
211.3	0.5963	0.4764	0.1936	0.5635	0.4378	0.1238	0.1238	0.5244	0.3245
211.4	0.4166	0.2261	0.1014	0.4740	0.3824	0.1238	0.1238	0.4840	0.2852
212.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.1238	0.4741	0.5157
212.2	0.5217	0.3243	0.2637	0.6286	0.4643	0.1238	0.1238	0.5244	0.3245
212.3	0.6416	0.3404	0.3002	0.6671	0.4619	0.1238	0.1238	0.5535	0.3502
212.4	0.5435	0.3418	0.2783	0.6465	0.4213	0.1238	0.1238	0.5244	0.3245
212.5	0.5244	0.3245	0.2177	0.5257	0.3800	0.1238	0.1238	0.5244	0.3245
213.1	0.5495	0.3450	0.2217	0.5125	0.3135	0.1238	0.1238	0.5244	0.3245
213.2	0.4245	0.2385	0.2107	0.5680	0.3506	0.1238	0.1238	0.5244	0.3245
213.3	0.4860	0.2867	0.1936	0.5635	0.3823	0.1238	0.1238	0.5244	0.3245
213.4	0.4463	0.2561	0.1936	0.5635	0.3823	0.0682	0.1364	0.5244	0.3245
214.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.0682	0.1364	0.5244	0.3245
214.2	0.5455	0.3263	0.2695	0.6783	0.4612	0.1364	0.1364	0.5244	0.3245
214.3	0.4959	0.3027	0.2110	0.6266	0.4114	0.1238	0.1238	0.4840	0.3245
214.4	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.1238	0.6110	0.3889
215.1	0.5297	0.3315	0.2452	0.6484	0.4355	0.1238	0.1238	0.5244	0.3245
215.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.1238	0.5244	0.3245
215.3	0.5059	0.3066	0.2483	0.6221	0.4242	0.1238	0.1238	0.5535	0.3544
216.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.1238	0.5244	0.3245
216.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.1238	0.5244	0.3245
216.3	0.4999	0.2963	0.1366	0.5200	0.3093	0.1238	0.1238	0.5244	0.3245
216.4	0.4930	0.2932	0.1916	0.5910	0.3648	0.1238	0.1238	0.5916	0.3357
216.5	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.1238	0.6765	0.4617
216.6	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.1238	0.5244	0.3245
217.1	0.6070	0.3925	0.1675	0.6791	0.3708	0.1238	0.1238	0.5244	0.3245
217.2	0.5297	0.3309	0.3237	0.6856	0.4968	0.1238	0.1238	0.5244	0.3245
217.3	0.6169	0.3954	0.1937	0.5635	0.3174	0.1238	0.1238	0.5244	0.3245
221.1	0.5852	0.3831	0.2094	0.7237	0.5208	0.1364	0.1364	0.4999	0.3022
221.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.1238	0.5244	0.3245
221.3	0.5554	0.3437	0.1338	0.5157	0.3231	0.1238	0.1238	0.5244	0.3245
221.4	0.4305	0.2378	0.1329	0.4982	0.3060	0.1238	0.1238	0.5244	0.3245
221.5	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.1238	0.5244	0.3245
222.1	0.5812	0.3731	0.2305	0.5635	0.4022	0.1238	0.1238	0.5244	0.3245
222.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.1238	0.5244	0.3245
222.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.1238	0.5244	0.3245
222.4	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.1238	0.5244	0.3245
223.1	0.4364	0.1231	0.1384	0.5257	0.3175	0.1238	0.1238	0.5244	0.3245
223.2	0.4820	0.2815	0.1818	0.5257	0.3175	0.1238	0.1238	0.5244	0.3245
223.3	0.5971	0.3814	0.1418	0.5635	0.3335	0.1238	0.1238	0.4503	0.2641
231.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.1238	0.5244	0.3245
231.2	0.4979	0.3245	0.1936	0.5635	0.3823	0.1238	0.1238	0.5244	0.3245
231.3	0.4979	0.3245	0.1936	0.5635	0.3823	0.1238	0.1238	0.5244	0.3245
231.4	0.5713	0.3549	0.2209	0.5635	0.3543	0.1238	0.1238	0.5244	0.3245
231.5	0.5098	0.3181	0.14766	0.6441	0.6006	0.1238	0.1238	0.5244	0.3245
232.1	0.4999	0.3002	0.1684	0.5319	0.3419	0.1238	0.1238	0.5495	0.2847
232.2	0.7280	0.5006	0.1936	0.5605	0.4098	0.1238	0.1238	0.5244	0.3245



Table C5.3 (2/10) Average cost per cubic meters of groundwater by the year 2010

Location	(Unit : US\$/m <sup>3</sup> )					Location	(Unit : US\$/m <sup>3</sup> )					
	Diesel+B/H	Electric+B/H	Hand+B/H	Solar+B/H	Wind+B/H		Diesel+B/H	Electric+B/H	Hand+B/H	Solar+B/H	Wind+B/H	
253.1	0.5244	0.3245	0.1116	0.5635	0.2880	0.1238	0.4047	0.2232	0.1786	0.5160	0.3501	0.1228
253.2	0.5244	0.3245	0.1036	0.5635	0.3823	0.1238	0.5244	0.3245	0.1936	0.5635	0.3823	0.1137
253.3	0.5244	0.3245	0.1036	0.5635	0.3823	0.1364	0.3729	0.2080	0.2383	0.5042	0.4038	0.1194
253.4	0.5116	0.3057	0.1031	0.5635	0.2852	0.1364	0.5634	0.3160	0.3166	0.5635	0.4822	0.1250
253.5	0.5244	0.3245	0.1036	0.5635	0.3823	0.1238	0.5455	0.3419	0.1936	0.5635	0.3875	0.1364
254.1	0.5244	0.3245	0.1036	0.5635	0.3823	0.1364	0.6260	0.4136	0.3100	0.5635	0.4313	0.1364
254.2	0.5244	0.3245	0.1036	0.5635	0.3823	0.1364	0.4642	0.2742	0.2274	0.5766	0.4167	0.1364
254.3	0.5244	0.3245	0.1936	0.5635	0.4923	0.1236	0.5574	0.3655	0.2904	0.6703	0.4914	0.1364
254.4	0.8372	0.6098	0.2775	0.5635	0.4923	0.1236	0.4860	0.2914	0.2107	0.5598	0.4241	0.1023
254.5	0.5244	0.3245	0.1936	0.5635	0.3823	0.1236	0.4761	0.2830	0.2277	0.5648	0.3837	0.1023
254.6	0.5240	0.4104	0.2295	0.5635	0.3823	0.1238	0.5078	0.3110	0.2429	0.6009	0.4629	0.1364
255.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.4939	0.2990	0.2372	0.6103	0.4438	0.1364
255.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.4682	0.2792	0.2702	0.5856	0.4111	0.1023
255.3	0.5244	0.3245	0.1767	0.4757	0.2956	0.1238	0.4900	0.2952	0.3034	0.5577	0.4851	0.1364
256.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.5733	0.3685	0.2876	0.5635	0.4492	0.1364
256.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.5727	0.3292	0.1936	0.5635	0.4998	0.1923
256.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.4900	0.3036	0.1936	0.6690	0.4556	0.1364
256.4	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.5244	0.3245	0.1936	0.5635	0.3823	0.1194
257	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.5244	0.3245	0.1936	0.5635	0.3823	0.1137
311.1	0.4483	0.2537	0.1380	0.5238	0.3297	0.1364	0.4860	0.2863	0.1551	0.5260	0.3317	0.1194
311.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5257	0.3244	0.1936	0.6234	0.4284	0.1023
311.3	0.4404	0.2469	0.1936	0.5635	0.3823	0.1364	0.4601	0.2856	0.3202	0.6872	0.4804	0.1364
311.4	0.3009	0.2043	0.1275	0.4900	0.3067	0.1364	0.4601	0.2856	0.3202	0.6872	0.4804	0.1364
311.5	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5158	0.3260	0.1936	0.5609	0.4944	0.1364
311.6	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5336	0.3260	0.1936	0.5635	0.3517	0.1364
311.7	0.4444	0.2553	0.1592	0.5180	0.3316	0.1364	0.5336	0.3260	0.1936	0.5635	0.3517	0.1364
311.8	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5336	0.3260	0.1936	0.5635	0.3517	0.1364
311.9	0.6824	0.4765	0.4879	0.5635	0.6404	0.1364	0.6144	0.2667	0.2870	0.4580	0.4557	0.1364
312.1	0.4662	0.2667	0.1101	0.4781	0.2875	0.1194	0.5207	0.2663	0.2173	0.6001	0.3886	0.1364
312.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.4364	0.2468	0.1936	0.5635	0.4619	0.1364
312.3	0.4701	0.2751	0.1036	0.5635	0.4275	0.1364	0.4999	0.3014	0.1788	0.5345	0.3648	0.1023
312.4	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.4263	0.2347	0.1887	0.5145	0.3211	0.1364
312.5	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.4206	0.2337	0.1264	0.4860	0.3050	0.1364
312.6	0.5335	0.3293	0.1006	0.4512	0.2745	0.1364	0.4642	0.2655	0.1172	0.4846	0.2928	0.1364
313.1	0.5217	0.3130	0.1047	0.5041	0.2882	0.1364	0.4801	0.2796	0.1307	0.5051	0.3096	0.1364
313.2	0.4900	0.2931	0.1113	0.4911	0.2435	0.1364	0.4642	0.2724	0.1307	0.5051	0.3096	0.1364
313.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
313.4	0.6090	0.4008	0.1936	0.5635	0.4558	0.1364	0.4979	0.3034	0.1200	0.4881	0.5004	0.1364
313.5	0.5832	0.3778	0.1936	0.5635	0.4987	0.1364	0.4860	0.2853	0.1200	0.4881	0.5004	0.1364
314.1	0.4979	0.3066	0.2093	0.5868	0.4345	0.1137	0.5348	0.4237	0.3032	0.5635	0.4599	0.1364
314.2	0.5244	0.3245	0.1106	0.5635	0.3823	0.1137	0.4283	0.2988	0.1575	0.4874	0.3473	0.1364
314.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.4883	0.2645	0.1652	0.5352	0.3401	0.1364
314.4	0.5356	0.3338	0.1627	0.5055	0.3360	0.1364	0.3729	0.2039	0.1528	0.6190	0.4175	0.1023
314.5	0.4860	0.2909	0.1195	0.5519	0.3525	0.1194	0.4701	0.2706	0.1192	0.5403	0.3202	0.1364
314.6	0.4602	0.2635	0.1547	0.5189	0.3189	0.1364	0.4820	0.2789	0.1086	0.4766	0.2831	0.1023
314.7	0.4364	0.2820	0.1716	0.5301	0.4280	0.1023	0.4444	0.2529	0.2773	0.4766	0.2831	0.1364
314.8	0.5244	0.3245	0.1936	0.5635	0.3823	0.1023	0.5376	0.3246	0.1004	0.5635	0.2770	0.1364

Table C5.3 (3/10) Average cost per cubic meters of groundwater by the year 2010

Location	(Unit : US\$/m3)					Location	(Unit : US\$/m3)				
	Diesel\$/H	Electric\$/H	Hand\$/H	Solar\$/H	Wind\$/H		Diesel\$/H	Electric\$/H	Hand\$/H	Solar\$/H	Wind\$/H
352.3	0.6368	0.4203	0.1752	0.5635	0.3931	422.4	0.5244	0.3245	0.1936	0.5635	0.3823
352.4	0.4186	0.2280	0.1528	0.5251	0.3308	423.5	0.3719	0.3245	0.1243	0.5635	0.3677
353.1	0.5673	0.3532	0.1405	0.5635	0.3243	423.5	0.5495	0.3682	0.1159	0.5635	0.2926
353.2	0.4642	0.2740	0.2158	0.6037	0.3785	423.2	0.5244	0.3245	0.2522	0.5635	0.3823
353.3	0.5237	0.3183	0.1712	0.5635	0.3443	423.3	0.2639	0.2639	0.3118	0.5635	0.4475
354.1	0.5773	0.3775	0.4298	0.7618	0.5836	423.1	0.4999	0.3706	0.2928	0.5969	0.4657
354.2	0.5244	0.3245	0.1936	0.5635	0.3923	431.2	0.5244	0.3245	0.1936	0.5635	0.2984
356.1	0.5244	0.3245	0.1936	0.5635	0.3923	431.3	0.5098	0.3044	0.1936	0.5635	0.3823
361.2	0.5244	0.3245	0.1936	0.5635	0.3923	431.4	0.5244	0.3245	0.1936	0.5635	0.3823
361.3	0.4880	0.2917	0.1624	0.5635	0.3534	431.5	0.5515	0.3459	0.1815	0.5373	0.3668
362.1	0.4880	0.2917	0.1624	0.5635	0.3534	431.6	0.5773	0.3693	0.2228	0.6343	0.3950
362.2	0.4880	0.2917	0.1624	0.5635	0.3534	431.7	0.7717	0.5427	0.1936	0.5635	0.3823
362.3	0.4880	0.2917	0.1624	0.5635	0.3534	431.8	0.5244	0.3245	0.1936	0.5635	0.3823
363.1	0.5244	0.3245	0.1936	0.5635	0.3923	432.1	0.5244	0.3245	0.1936	0.5635	0.4346
363.2	0.4999	0.2971	0.1619	0.5635	0.3534	432.2	0.5244	0.3245	0.1936	0.5635	0.3823
363.3	0.5244	0.3245	0.1936	0.5635	0.3923	432.3	0.4602	0.2608	0.2444	0.6065	0.4088
363.4	0.4820	0.2803	0.1811	0.5394	0.3222	432.4	0.5158	0.3167	0.2392	0.5764	0.4070
363.5	0.4364	0.2442	0.1423	0.5023	0.3097	432.5	0.4761	0.2760	0.1452	0.5000	0.3196
363.6	0.3749	0.2015	0.1277	0.4897	0.2895	433.1	0.4879	0.3046	0.2739	0.5946	0.4240
364.1	0.5244	0.3245	0.1936	0.5635	0.3923	433.2	0.2895	0.1552	0.0942	0.2668	0.1364
364.2	0.4820	0.2803	0.1811	0.5394	0.3222	433.3	0.3511	0.2570	0.1156	0.4804	0.1137
364.3	0.4820	0.2803	0.1811	0.5394	0.3222	433.4	0.4543	0.2745	0.3345	0.7337	0.1364
364.4	0.4820	0.2803	0.1811	0.5394	0.3222	433.5	0.4847	0.2604	0.2604	0.5635	0.4122
364.5	0.4820	0.2803	0.1811	0.5394	0.3222	433.6	0.5244	0.3245	0.1936	0.5635	0.3823
411.1	0.5244	0.3245	0.1936	0.5635	0.3923	433.7	0.5244	0.3245	0.1936	0.5635	0.3823
411.2	0.5039	0.3072	0.1582	0.5190	0.2750	434.1	0.5713	0.3636	0.2113	0.6401	0.4004
411.3	0.5244	0.3245	0.1936	0.5635	0.3923	434.2	0.5039	0.3091	0.2428	0.6124	0.1364
411.4	0.4126	0.2226	0.2189	0.4796	0.2888	434.3	0.4781	0.2906	0.2102	0.5660	0.3981
411.5	0.6487	0.4435	0.4750	0.5635	0.6259	434.4	0.5244	0.3245	0.1936	0.5635	0.3823
411.6	0.5244	0.3245	0.1936	0.5635	0.3923	434.5	0.5244	0.3245	0.1936	0.5635	0.3823
411.7	0.4880	0.2986	0.2019	0.5547	0.4283	435.1	0.4920	0.2956	0.4123	0.6392	0.1364
412.1	0.5244	0.3245	0.1936	0.5635	0.3923	435.2	0.5244	0.3245	0.1936	0.5635	0.3823
412.2	0.5435	0.3406	0.3142	0.6832	0.4788	435.3	0.3664	0.2529	0.1363	0.5027	0.1364
412.3	0.3848	0.2080	0.1621	0.5347	0.3397	435.4	0.5435	0.3358	0.2203	0.6377	0.3644
412.4	0.6050	0.3960	0.2885	0.5635	0.4490	435.5	0.5039	0.3016	0.1484	0.5137	0.137
413.1	0.4662	0.2705	0.1621	0.5332	0.3485	435.6	0.5244	0.3245	0.1936	0.5635	0.1194
413.2	0.5244	0.3245	0.1936	0.5635	0.3923	436	0.5031	0.3915	0.1958	0.4821	0.3635
413.3	0.5244	0.3245	0.1936	0.5635	0.3923	441.1	0.5244	0.3245	0.1936	0.5635	0.1364
413.4	0.5244	0.3245	0.1936	0.5635	0.3923	441.2	0.5244	0.3245	0.1936	0.5635	0.3823
413.5	0.5554	0.3477	0.1738	0.4837	0.3660	441.3	0.5217	0.3209	0.2765	0.5675	0.1364
413.6	0.5244	0.3245	0.1936	0.5635	0.3923	442.1	0.4662	0.2662	0.1206	0.5137	0.1364
413.7	0.5244	0.3245	0.1936	0.5635	0.3923	442.2	0.4900	0.3548	0.0551	0.5231	0.3755
421.1	0.4721	0.2762	0.1926	0.5635	0.3823	442.3	0.5244	0.3245	0.1936	0.5635	0.1364
421.2	0.6963	0.4746	0.2891	0.5635	0.3608	443.1	0.5244	0.3245	0.1936	0.5635	0.3823
421.3	0.4206	0.2290	0.0802	0.4527	0.2640	443.2	0.5019	0.2906	0.1471	0.5117	0.1364
422.2	0.4642	0.2664	0.1307	0.4887	0.2972	443.3	0.5345	0.3145	0.1703	0.5635	0.1364
422.3	0.4781	0.2768	0.2247	0.4867	0.3886	443.4	0.4682	0.2728	0.1948	0.5570	0.1364
						443.5	0.4532	0.1715	0.4453	0.5635	0.1364

Table C5.3 (4/10) Average cost per cubic meters of groundwater by the year 2010

Location	(Unit : US\$/m <sup>3</sup> )					Location	(Unit : US\$/m <sup>3</sup> )					
	Diesel+B/H	Electric+B/H	Hand+B/H	Solar+B/H	Wind+B/H		Hand+S/W	Solar+B/H	Electric+B/H	Hand+B/H	Wind+S/W	
443.6	0.5396	0.3375	0.2283	0.4991	0.4145	0.1364	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238
443.7	0.5515	0.3465	0.2491	0.5973	0.4065	0.1023	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
444.1	0.5207	0.3295	0.2776	0.6035	0.4278	0.1364	0.5475	0.3457	0.2934	0.6107	0.4432	0.1238
444.2	0.4503	0.2580	0.1856	0.5387	0.3705	0.1364	0.4364	0.2434	0.1236	0.4962	0.3042	0.1364
444.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238
444.4	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238
445.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238
445.2	0.4781	0.2789	0.1366	0.5090	0.3159	0.1364	0.5244	0.3245	0.1155	0.5635	0.3823	0.1364
445.3	0.4582	0.3213	0.2362	0.7120	0.3844	0.1364	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
446.2	0.5244	0.3168	0.3018	0.6592	0.4709	0.1364	0.5475	0.3463	0.2651	0.6390	0.4487	0.1364
446.3	0.5244	0.2729	0.2010	0.6451	0.3954	0.1364	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
446.4	0.5158	0.3217	0.2670	0.6191	0.4277	0.1364	0.6864	0.4763	0.1936	0.5635	0.5448	0.1238
446.5	0.4503	0.2617	0.2865	0.6416	0.4670	0.1364	0.5664	0.3647	0.2743	0.7373	0.5266	0.1364
447.1	0.5197	0.3211	0.2202	0.5635	0.4275	0.1023	0.4622	0.2713	0.2595	0.6394	0.4298	0.1364
447.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238
447.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
447.4	0.6050	0.3969	0.1903	0.5251	0.4296	0.1364	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
447.5	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.4602	0.2790	0.3372	0.6969	0.5018	0.1364
447.6	0.4999	0.3024	0.1221	0.4828	0.2947	0.1137	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
447.7	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
447.8	0.4325	0.2412	0.1473	0.5166	0.3250	0.1364	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
448.1	0.4990	0.2983	0.2146	0.5322	0.3718	0.1023	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
448.2	0.4642	0.2657	0.1922	0.4748	0.2844	0.1023	0.4820	0.2812	0.1226	0.4950	0.2960	0.1238
448.3	0.4364	0.2981	0.1628	0.4596	0.3597	0.1137	0.5244	0.3245	0.1101	0.5635	0.3823	0.1238
448.4	0.5257	0.3178	0.1596	0.4796	0.3034	0.1137	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238
449.1	0.6090	0.4152	0.3090	0.4751	0.4793	0.1137	0.5244	0.3245	0.1621	0.5635	0.3823	0.1238
449.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
449.4	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
451.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1194	0.5336	0.3339	0.2485	0.6869	0.4946	0.1364
451.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1194	0.6011	0.3820	0.1567	0.5635	0.3245	0.1364
451.3	0.6288	0.4247	0.1280	0.5487	0.5276	0.1194	0.4463	0.3023	0.1095	0.4767	0.2864	0.1364
452.1	0.6090	0.3871	0.1560	0.5635	0.3016	0.1194	0.4781	0.2800	0.1108	0.4735	0.2972	0.1238
452.2	0.4900	0.2872	0.1212	0.5324	0.3007	0.1137	0.4404	0.2549	0.2107	0.6564	0.4519	0.1364
453.1	0.5059	0.3045	0.1529	0.4623	0.3391	0.1137	0.4503	0.2631	0.2266	0.6936	0.3868	0.1238
453.2	0.4721	0.2759	0.1088	0.4725	0.4090	0.1194	0.5197	0.3176	0.1972	0.5554	0.3669	0.1238
454.1	0.5244	0.3245	0.1936	0.5635	0.4730	0.1238	0.5138	0.3067	0.1128	0.4695	0.2929	0.1364
454.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.4979	0.2981	0.1715	0.5373	0.3308	0.1194
454.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.5244	0.3245	0.1936	0.5635	0.3823	0.1137
455.1	0.4027	0.2293	0.1576	0.5635	0.3156	0.1364	0.5654	0.3508	0.2588	0.6635	0.3002	0.1137
455.2	0.5336	0.3230	0.1360	0.5134	0.3033	0.1364	0.5535	0.3523	0.1230	0.5635	0.4508	0.1137
456.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
456.2	0.6773	0.3615	0.1536	0.5635	0.3532	0.1364	0.5244	0.3245	0.0760	0.5635	0.3823	0.1137
456.3	0.6804	0.4471	0.1206	0.5635	0.2892	0.1364	0.4503	0.2676	0.0833	0.4559	0.3842	0.1137
461.1	0.4804	0.2464	0.1298	0.4962	0.3042	0.1364	0.4523	0.2752	0.1288	0.4555	0.3816	0.1137
461.2	0.4950	0.2976	0.2080	0.5531	0.3709	0.1364	0.5244	0.3245	0.1758	0.5635	0.4702	0.1194
461.3	0.5059	0.3022	0.1942	0.5163	0.3181	0.1238	0.4106	0.2393	0.1936	0.5675	0.3629	0.1364

Table CS-3 (5/10) Average cost per cubic meters of groundwater by the year 2010

Location	(Unit : US\$/m <sup>3</sup> )					(Unit : US\$/m <sup>3</sup> )				
	Diesel+B/H	Electric+B/H	Hand+B/H	Solar+B/H	Wind+B/H	Hand+S/W	Solar+S/W	Wind+S/W	Hand+S/W	Hand+S/W
514.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
515.1	0.5244	0.3245	0.2815	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
515.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
515.3	0.6288	0.4133	0.1241	0.4837	0.1364	0.1364	0.1936	0.5635	0.3245	0.1364
515.4	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
516	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
517.1	0.4662	0.2645	0.1687	0.4486	0.2602	0.1137	0.1687	0.4486	0.2645	0.1137
517.2	0.5244	0.3245	0.0930	0.5635	0.3823	0.1137	0.0930	0.5635	0.3245	0.1137
518	0.4939	0.2897	0.1055	0.4790	0.2869	0.1137	0.1055	0.4790	0.2897	0.1137
519.1	0.4543	0.2610	0.2747	0.5804	0.3901	0.1137	0.2747	0.5804	0.2610	0.1137
519.2	0.4939	0.2915	0.1523	0.5032	0.3069	0.1364	0.1523	0.5032	0.2915	0.1364
521.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
521.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
521.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
522.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
522.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
523.1	0.5244	0.3245	0.3045	0.5635	0.3823	0.1364	0.3045	0.5635	0.3245	0.1364
523.2	0.4860	0.2918	0.3768	0.7454	0.5342	0.1364	0.3768	0.7454	0.2918	0.1364
524.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
524.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
524.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
525.1	0.5244	0.3245	0.1500	0.5635	0.3823	0.1364	0.1500	0.5635	0.3245	0.1364
525.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.1936	0.5635	0.3245	0.1238
526.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
526.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
526.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
526.4	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
527.1	0.5812	0.3736	0.0859	0.5635	0.4392	0.1364	0.0859	0.5635	0.3736	0.1364
531.2	0.6923	0.4779	0.1936	0.5635	0.4841	0.1137	0.1936	0.5635	0.4779	0.1137
531.3	0.6348	0.4244	0.3195	0.5635	0.4849	0.1137	0.3195	0.5635	0.4244	0.1137
532.1	0.7141	0.5001	0.1936	0.5635	0.5220	0.1194	0.1936	0.5635	0.5001	0.1194
532.2	0.5244	0.3245	0.1058	0.5635	0.3823	0.1364	0.1058	0.5635	0.3245	0.1364
532.3	0.4444	0.2506	0.1316	0.5201	0.3027	0.1364	0.1316	0.5201	0.2506	0.1364
532.4	0.6320	0.4162	0.2578	0.5635	0.3662	0.1364	0.2578	0.5635	0.4162	0.1364
533.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
533.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
534	0.5951	0.3864	0.3332	0.5635	0.4578	0.1137	0.3332	0.5635	0.3864	0.1137
535.1	0.5244	0.3245	0.4990	0.5635	0.6474	0.1194	0.4990	0.5635	0.3245	0.1194
535.2	0.4384	0.2480	0.1936	0.5190	0.4175	0.1023	0.1936	0.5190	0.2480	0.1023
535.3	0.5733	0.3577	0.1413	0.5181	0.3124	0.1194	0.1413	0.5181	0.3577	0.1194
535.4	0.5594	0.3452	0.1151	0.5635	0.2921	0.1137	0.1151	0.5635	0.3452	0.1137
536.1	0.8014	0.5793	0.1936	0.5635	0.5399	0.1137	0.1936	0.5635	0.5793	0.1137
536.2	0.5773	0.3596	0.1092	0.4542	0.2891	0.1228	0.1092	0.4542	0.3596	0.1228
537.1	0.5244	0.3245	0.0861	0.5635	0.3823	0.1364	0.0861	0.5635	0.3245	0.1364
537.2	0.5244	0.3245	0.1372	0.5635	0.3050	0.1364	0.1372	0.5635	0.3245	0.1364
537.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
611.1	0.5277	0.3357	0.2440	0.5635	0.4011	0.1364	0.2440	0.5635	0.3357	0.1364
611.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.1936	0.5635	0.3245	0.1364
611.3	0.4820	0.2861	0.1581	0.5225	0.3831	0.1364	0.1581	0.5225	0.2861	0.1364
611.4	0.4582	0.2637	0.2207	0.5703	0.3725	0.1364	0.2207	0.5703	0.2637	0.1364

Table C5.3 (6/10) Average cost per cubic meters of groundwater by the year 2010

Location	(Unit : US\$/m3)					Location	(Unit : US\$/m3)						
	Diesel+B/H	Electric+B/H	Hand+B/H	Solar+B/H	Wind+B/H		Diesel+B/H	Electric+B/H	Hand+B/H	Solar+B/H	Wind+B/H		
632.1	0.5244	0.3245	0.3495	0.5635	0.4950	0.1137	646.2	0.5244	0.3245	0.1501	0.5635	0.3823	0.1364
632.2	0.6348	0.4123	0.1744	0.5635	0.3313	0.1364	646.3	0.6249	0.4186	0.3069	0.5635	0.5242	0.1364
632.3	0.4900	0.2922	0.2401	0.5992	0.4261	0.1023	646.4	0.6249	0.4186	0.1284	0.4760	0.2855	0.1364
632.4	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	646.5	0.5673	0.3625	0.2351	0.5101	0.4475	0.1236
632.5	0.5244	0.3245	0.2743	0.5635	0.4349	0.1023	646.6	0.5158	0.3131	0.2513	0.5917	0.2513	0.1236
632.6	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	646.7	0.4385	0.2301	0.1114	0.4840	0.2020	0.1364
632.7	0.5237	0.3214	0.1738	0.5777	0.3787	0.1364	646.8	0.5277	0.3273	0.2525	0.5787	0.4135	0.1364
633.1	0.4662	0.2742	0.2107	0.5983	0.3838	0.1364	647.1	0.4860	0.3113	0.1936	0.5635	0.5066	0.1364
633.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	647.2	0.4860	0.2825	0.2888	0.5635	0.2899	0.1023
633.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	647.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
633.4	0.5614	0.3583	0.2990	0.6591	0.4653	0.1364	647.4	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
634.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	647.5	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
634.2	0.5257	0.3185	0.3232	0.5635	0.3823	0.1364	648.1	0.5244	0.3245	0.1028	0.5635	0.3823	0.1137
634.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1137	648.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1023
634.4	0.5376	0.3283	0.1936	0.5635	0.3823	0.1137	648.3	0.4900	0.2900	0.1426	0.5244	0.3184	0.1023
634.5	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	648.4	0.5244	0.3245	0.1936	0.5635	0.3823	0.1023
634.6	0.5244	0.3245	0.3237	0.5635	0.3823	0.1137	648.5	0.5244	0.3245	0.1936	0.5635	0.3823	0.1023
635.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	649.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238
635.2	0.4662	0.2709	0.2430	0.6139	0.4128	0.1137	649.2	0.5316	0.3310	0.2604	0.6185	0.4264	0.1364
635.3	0.5244	0.3245	0.1076	0.5635	0.3823	0.1137	649.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
635.4	0.5693	0.3563	0.1609	0.5635	0.3339	0.1364	649.4	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
635.5	0.5244	0.3245	0.4376	0.5635	0.3823	0.1364	649.5	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
641.1	0.5673	0.3628	0.1936	0.5635	0.4573	0.1023	649.6	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
641.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1023	649.7	0.7776	0.4296	0.1936	0.5635	0.4296	0.1364
641.3	0.4543	0.2659	0.1390	0.4933	0.3306	0.1023	649.8	0.5178	0.3183	0.2566	0.6961	0.4378	0.1364
641.4	0.5244	0.3245	0.1936	0.5635	0.3823	0.1137	711.1	0.6150	0.4041	0.2099	0.5635	0.4573	0.1023
641.5	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	711.2	0.4007	0.2215	0.1923	0.4946	0.3021	0.1137
642.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1023	711.3	0.5773	0.3631	0.1526	0.5151	0.3193	0.1137
642.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	712.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238
642.3	0.6666	0.4472	0.2131	0.5635	0.4319	0.0682	712.2	0.5257	0.3209	0.1854	0.5695	0.3729	0.1364
642.4	0.5244	0.3245	0.1936	0.5635	0.3172	0.0682	712.3	0.6130	0.4002	0.1473	0.6376	0.3970	0.1364
642.5	0.5244	0.3245	0.1936	0.5635	0.3823	0.1023	713.1	0.4959	0.2998	0.1909	0.5157	0.3956	0.1364
642.6	0.5244	0.3245	0.1936	0.5635	0.3823	0.1023	713.2	0.5244	0.3245	0.1117	0.5635	0.3823	0.1364
642.7	0.5244	0.3245	0.3857	0.5635	0.4228	0.1364	713.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
643.1	0.5455	0.3431	0.2796	0.5315	0.4228	0.1364	713.4	0.4701	0.2783	0.2910	0.6293	0.4408	0.1137
643.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1023	713.5	0.5244	0.3245	0.1936	0.5635	0.3823	0.1137
643.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1023	713.6	0.5244	0.3245	0.1936	0.5635	0.3823	0.1137
643.4	0.5832	0.3640	0.1936	0.5635	0.3823	0.1023	713.7	0.5244	0.3245	0.2367	0.5635	0.5209	0.1137
643.5	0.5244	0.3245	0.1936	0.5635	0.3823	0.1023	713.8	0.6229	0.3839	0.0695	0.5635	0.2701	0.1137
643.6	0.5244	0.3245	0.1936	0.5635	0.3823	0.1023	713.9	0.5244	0.3245	0.1936	0.5635	0.3823	0.1137
643.7	0.5118	0.3220	0.2694	0.5487	0.4068	0.1364	713.A	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
644.1	0.5244	0.3245	0.1133	0.5635	0.3823	0.1364	714.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1137
644.2	0.5178	0.3137	0.2222	0.5157	0.3407	0.1364	714.2	0.4741	0.2779	0.2096	0.5516	0.3762	0.1364
644.3	0.5098	0.3042	0.1418	0.5635	0.3106	0.1364	721.1	0.4900	0.2978	0.2838	0.6572	0.4494	0.1137
645.1	0.6487	0.4392	0.3447	0.7072	0.5118	0.1364	721.2	0.5244	0.3245	0.1524	0.5635	0.3823	0.1137
645.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1137	721.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364
645.3	0.5050	0.3095	0.2269	0.6067	0.4297	0.1137	721.4	0.4999	0.3058	0.2562	0.6074	0.4243	0.1364
646.1	0.7280	0.5048	0.2035	0.5635	0.4160	0.1238	721.5	0.6565	0.4630	0.3104	0.5635	0.5095	0.1364

Table C5.3 (7/10) Average cost per cubic meters of groundwater by the year 2010

Location	(Unit : US\$/m <sup>3</sup> )					Location	(Unit : US\$/m <sup>3</sup> )				
	Diesel+B/H	Electric+B/H	Hand+B/H	Solar+B/H	Wind+B/H		Diesel+B/H	Electric+B/H	Hand+B/H	Solar+B/H	Wind+B/H
721.6	0.5495	0.3367	0.1365	0.5635	0.3011	0.1364	0.5244	0.3245	0.1936	0.5635	0.3823
722.1	0.5244	0.3245	0.4209	0.5635	0.3823	0.1364	0.4642	0.2762	0.1936	0.6265	0.4763
722.2	0.5912	0.3884	0.3052	0.6204	0.4747	0.1137	0.5475	0.4067	0.5514	0.7641	0.1238
722.3	0.6244	0.3245	0.1936	0.5635	0.3823	0.1023	0.5693	0.3653	0.5635	0.1936	0.1364
723.1	0.4741	0.2815	0.2519	0.7318	0.5216	0.1364	0.1364	0.1364	0.1364	0.1364	0.1364
723.2	0.4225	0.3245	0.1740	0.5353	0.3402	0.1364	0.7082	0.4934	0.5635	0.1936	0.1364
723.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.6173	0.5929	0.5635	0.3626	0.0682
723.4	0.5475	0.3390	0.1306	0.5355	0.3387	0.1364	0.5244	0.3245	0.5635	0.1936	0.0682
724.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5244	0.3245	0.5635	0.1936	0.0682
724.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5244	0.3245	0.5635	0.1936	0.0682
724.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5244	0.3245	0.5635	0.1936	0.0682
724.4	0.5336	0.3355	0.1552	0.5635	0.4951	0.1364	0.4889	0.2896	0.5354	0.3889	0.1238
725.1	0.5244	0.3245	0.1245	0.5635	0.2677	0.1364	0.5244	0.3245	0.5635	0.1936	0.1238
725.2	0.4543	0.2606	0.1811	0.5678	0.3702	0.1023	0.4186	0.2290	0.5260	0.3316	0.1238
725.3	0.5356	0.3391	0.3432	0.7112	0.5073	0.1023	0.5244	0.3245	0.5635	0.1936	0.1238
725.4	0.6546	0.4457	0.1936	0.5635	0.5266	0.1364	0.5244	0.3245	0.5635	0.1936	0.1238
725.5	0.4305	0.2384	0.1526	0.5117	0.3185	0.1364	0.6288	0.4212	0.6402	0.4952	0.1364
725.6	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5455	0.3371	0.5635	0.3309	0.1364
726.1	0.5376	0.3368	0.1842	0.5966	0.4570	0.1238	0.4900	0.2912	0.6098	0.4887	0.1238
726.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.5019	0.3058	0.7317	0.5215	0.1238
726.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.5244	0.3245	0.1936	0.5635	0.3823
727.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.4920	0.2971	0.3113	0.4774	0.1238
727.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.5244	0.3245	0.1936	0.5635	0.3823
731.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.6150	0.3920	0.1258	0.3074	0.1238
731.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5244	0.3245	0.1936	0.5635	0.3823
731.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.6070	0.3878	0.1403	0.3117	0.0682
731.4	0.5356	0.3325	0.1058	0.5553	0.3920	0.1364	0.4245	0.2445	0.2720	0.4475	0.0682
731.5	0.5138	0.3132	0.1913	0.5470	0.2861	0.1364	0.5554	0.3418	0.1326	0.5635	0.3125
731.6	0.4563	0.2600	0.1113	0.4745	0.2882	0.1364	0.3789	0.2073	0.1159	0.4716	0.1238
732.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.6655	0.4516	0.2885	0.5635	0.1238
732.2	0.4999	0.2990	0.1424	0.5153	0.3534	0.1364	0.5892	0.3769	0.1745	0.5737	0.3602
732.3	0.5374	0.3496	0.2155	0.5635	0.3470	0.1364	0.5244	0.3245	0.1936	0.5635	0.3823
733.1	0.5316	0.3310	0.2984	0.6044	0.4384	0.1137	0.5244	0.3245	0.1936	0.5635	0.3823
733.2	0.5314	0.3602	0.3497	0.6791	0.5065	0.1137	0.6626	0.4366	0.1699	0.3886	0.1238
733.3	0.6249	0.4143	0.2467	0.6101	0.4664	0.0682	0.5812	0.3633	0.1174	0.5635	0.1238
733.4	0.5244	0.3245	0.1936	0.5635	0.3823	0.0682	0.5217	0.3223	0.2432	0.5678	0.1238
733.5	0.4781	0.2777	0.1100	0.4885	0.2895	0.1238	0.5244	0.3245	0.1936	0.5635	0.3823
733.6	0.5168	0.3167	0.1936	0.5635	0.3823	0.0682	0.5244	0.3245	0.1936	0.5635	0.3823
733.7	0.4820	0.2809	0.1864	0.4960	0.3558	0.1238	0.5244	0.3245	0.1936	0.5635	0.3823
733.8	0.5972	0.3672	0.1174	0.5635	0.2964	0.1238	0.4900	0.2881	0.1231	0.5635	0.3037
733.9	0.4483	0.2529	0.1291	0.4935	0.3035	0.1238	0.5244	0.3245	0.1936	0.5635	0.3823
734.1	0.5237	0.3147	0.1113	0.4810	0.2882	0.1238	0.5244	0.3245	0.1936	0.5635	0.3823
734.2	0.6150	0.4125	0.3723	0.5635	0.5671	0.1238	0.5244	0.3245	0.1936	0.5635	0.3823
734.3	0.5244	0.3245	0.4827	0.5635	0.3823	0.0682	0.5244	0.3245	0.1936	0.5635	0.3823
741.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.4285	0.3008	0.1414	0.5635	0.1137
741.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.5244	0.3245	0.1936	0.5635	0.3823
741.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.4909	0.3047	0.3990	0.7649	0.1023
742.1	0.5078	0.3098	0.1978	0.6106	0.3987	0.1238	0.5244	0.3245	0.1936	0.5635	0.3823

Table C5.3 (8/10) Average cost per cubic meters of groundwater by the year 2010

Location	(Unit : US\$/m3)					Location	(Unit : US\$/m3)				
	Diesel+B/H	Electric+B/H	Hand+B/H	Solar+B/H	Wind+B/H		Diesel+B/H	Electric+B/H	Hand+B/H	Solar+B/H	Wind+B/H
754.5	0.4900	0.2931	0.2051	0.5949	0.4013	0.1364	0.5244	0.3245	0.1936	0.5635	0.0682
755.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.1023	0.5244	0.3245	0.1936	0.5635	0.1023
755.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1023	0.5244	0.3245	0.1936	0.5635	0.1023
755.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1023	0.5244	0.3245	0.1936	0.5635	0.1023
761.1	0.5692	0.3719	0.1936	0.5635	0.3009	0.1364	0.5244	0.3245	0.1936	0.5635	0.1238
761.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5244	0.3245	0.1936	0.5635	0.1238
761.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5244	0.3245	0.1936	0.5635	0.1238
761.4	0.5244	0.3245	0.1936	0.5635	0.3823	0.1364	0.5244	0.3245	0.1936	0.5635	0.1238
761.5	0.6070	0.3865	0.1324	0.5635	0.3066	0.1364	0.5244	0.3245	0.1936	0.5635	0.1364
762.1	0.5455	0.3066	0.1316	0.5635	0.3040	0.1023	0.5244	0.3245	0.1936	0.5635	0.1238
762.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1023	0.5244	0.3245	0.1936	0.5635	0.1238
762.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1023	0.5244	0.3245	0.1936	0.5635	0.1238
762.4	0.5244	0.3245	0.1936	0.5635	0.3823	0.1023	0.5244	0.3245	0.1936	0.5635	0.1238
762.5	0.5673	0.3504	0.1193	0.4754	0.2940	0.1364	0.4325	0.2301	0.1258	0.4785	0.1238
762.6	0.5244	0.3245	0.3021	0.5635	0.4496	0.1364	0.5244	0.3245	0.1936	0.5635	0.1364
763.1	0.5297	0.3234	0.2076	0.5635	0.3320	0.1364	0.5244	0.3245	0.1936	0.5635	0.0682
763.2	0.4860	0.2822	0.1021	0.4654	0.2757	0.1023	0.5244	0.3245	0.1936	0.5635	0.0682
763.3	0.5244	0.3245	0.1332	0.5635	0.2823	0.1023	0.5244	0.3245	0.1936	0.5635	0.0682
763.4	0.5566	0.4351	0.1954	0.5635	0.3493	0.1364	0.5244	0.3245	0.1936	0.5635	0.0682
763.5	0.5773	0.3586	0.1976	0.5635	0.3367	0.1023	0.5495	0.3372	0.1184	0.4935	0.0682
763.6	0.5852	0.3684	0.2237	0.5635	0.3154	0.1364	0.5039	0.2901	0.1482	0.4910	0.0682
771.1	0.2916	0.1516	0.1871	0.5140	0.3205	0.1364	0.4920	0.2899	0.1421	0.5105	0.1238
771.2	0.4364	0.2558	0.1507	0.5140	0.2998	0.1364	0.5244	0.3245	0.1936	0.5635	0.1238
771.3	0.5244	0.3245	0.1797	0.5635	0.3823	0.1364	0.5244	0.3245	0.1936	0.5635	0.0682
771.4	0.4761	0.2781	0.1886	0.5733	0.3512	0.1364	0.5244	0.3245	0.1936	0.5635	0.1238
771.5	0.5654	0.3559	0.1720	0.5661	0.3534	0.1364	0.5244	0.3245	0.1936	0.5635	0.1023
771.6	0.4741	0.3745	0.1831	0.5390	0.3344	0.1364	0.4106	0.3692	0.1145	0.4665	0.0682
772.1	0.5217	0.3118	0.1287	0.5574	0.3041	0.1364	0.6308	0.4171	0.1318	0.5635	0.0682
772.2	0.5197	0.3142	0.1290	0.4950	0.3372	0.1364	0.5244	0.3245	0.1936	0.5635	0.0682
772.3	0.5244	0.3245	0.1788	0.5635	0.3823	0.1364	0.4900	0.2959	0.1936	0.5635	0.0682
772.4	0.5244	0.3245	0.0940	0.5635	0.3823	0.1364	0.6388	0.4268	0.2734	0.5635	0.0682
772.5	0.4741	0.2787	0.1900	0.5745	0.3764	0.1238	0.4126	0.2334	0.2360	0.5999	0.1023
773.1	0.4832	0.3660	0.1563	0.8460	0.3253	0.1364	0.5244	0.3245	0.1936	0.5635	0.1023
773.2	0.5297	0.3252	0.2858	0.6774	0.4397	0.1238	0.4543	0.2586	0.1269	0.4905	0.1238
773.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.5244	0.3245	0.1936	0.5635	0.1238
774.1	0.5244	0.3245	0.1434	0.5635	0.3823	0.1238	0.5244	0.3245	0.1936	0.5635	0.1238
774.2	0.5515	0.3417	0.1169	0.5050	0.3187	0.1238	0.5773	0.3595	0.1411	0.5635	0.1238
774.3	0.5356	0.3249	0.1406	0.5635	0.3280	0.1238	0.5535	0.3401	0.1126	0.4755	0.1364
774.4	0.5244	0.3245	0.1936	0.5635	0.4179	0.1364	0.5244	0.3245	0.1936	0.5635	0.1023
774.5	0.5078	0.3036	0.1484	0.5441	0.3211	0.1238	0.5614	0.3458	0.1091	0.5635	0.1364
774.6	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.6308	0.4219	0.3110	0.5635	0.1023
774.7	0.5356	0.3263	0.1213	0.4980	0.3009	0.1238	0.5244	0.3245	0.1936	0.5635	0.1023
774.8	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.5244	0.3245	0.1936	0.5635	0.1023
774.9	0.5376	0.3371	0.1946	0.7316	0.4207	0.1238	0.5019	0.3041	0.2937	0.5090	0.1364
811.1	0.5244	0.3245	0.1936	0.5635	0.3823	0.0682	0.5244	0.3245	0.1936	0.5635	0.1023
811.2	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.5244	0.3245	0.1936	0.5635	0.1023
811.3	0.5244	0.3245	0.1936	0.5635	0.3823	0.1238	0.4840	0.2844	0.1631	0.5290	0.1023
811.4	0.5244	0.3245	0.1936	0.5635	0.3823	0.0682	0.5244	0.3245	0.1936	0.5635	0.1023