

The logo of Chiang Mai University is a large, faint watermark in the background. It is circular and contains the Thai text 'มหาวิทยาลัยเชียงใหม่' (Mahavithayalai Chiang Mai) at the top and 'CHIANG MAI UNIVERSITY' at the bottom. In the center, there is a traditional Thai emblem featuring a multi-tiered umbrella, a flame, and a snake-like figure.

APPENDIX A
SPECIFIC YIELD CALCULATED BY MEANS OF
THE WATER BUDGET APPROACH

- Appendix A1 Calculated specific yield during June-September months.
- Appendix A2 Calculated specific yield during July-September months.
- Appendix A3 Calculated specific yield during July-October months.
- Appendix A4 Calculated specific yield during August-November months.

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

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Appendix A1 Calculated specific yield during June-September months.

Year	Well AUG1		Well AUG3		Well AUG5		Well G0135		Well G0263		Well G0486		Well G0147		Well AUG4		Well G0244	
	$\Delta H(\text{mm})$	$S_{y(\text{WBd})}$	$\Delta H(\text{mm})$	$S_{y(\text{WBd})}$	$\Delta H(\text{mm})$	$S_{y(\text{WBd})}$	$\Delta H(\text{mm})$	$S_{y(\text{WBd})}$	$\Delta H(\text{mm})$	$S_{y(\text{WBd})}$	$\Delta H(\text{mm})$	$S_{y(\text{WBd})}$	$\Delta H(\text{mm})$	$S_{y(\text{WBd})}$	$\Delta H(\text{mm})$	$S_{y(\text{WBd})}$	$\Delta H(\text{mm})$	$S_{y(\text{WBd})}$
1967	-	-	-	-	-	0.0466	1,650	0.0466	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	0.0109	2,110	0.0109	-	-	-	-	-	-	-	-	-	-
1969	1,550	0.0148	550	0.0418	700	0.0329	2,110	0.0109	-	-	-	-	430	0.0091	1,430	0.0126	-	-
1970	60	0.4845	340	0.0244	340	0.0855	1,070	0.0272	-	-	-	-	490	0.0101	950	0.0239	-	-
1971	1,710	0.0157	430	0.0623	240	0.1115	2,010	0.0133	-	-	-	-	1,310	0.0035	970	0.0215	-	-
1972	-310	0.0236	-	-	-	-	-	-	-	-	-	-	-180	0.0069	-	-	-	-
1973	-	-	610	0.0114	430	0.0162	1,550	0.0045	-	-	-	-	580	0.0021	1,560	0.0035	-	-
1974	1,100	0.0093	210	0.0488	400	0.0256	60	0.0091	-	-	-	-	700	0.0025	800	0.0100	-	-
1975	2,650	0.0100	910	0.0291	790	0.0336	1,710	0.0202	-	-	-	-	640	0.0071	1,800	0.0115	-	-
1976	-550	0.0125	-210	0.0326	-430	0.0159	-310	0.0149	-	-	-	-	-700	0.0017	-330	0.0162	-	-
1977	1,460	0.0173	700	0.0360	850	0.0296	-	0.0175	-	-	-	-	920	0.0047	1,680	0.0117	-	-
1978	1,370	0.0299	710	0.0577	980	0.0418	1,100	-	-	-	-	-	1,140	0.0061	830	0.0385	-	-
1979	-	-	-30	0.0530	-	-	2,650	-	-	-	-	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-550	-	-	-	-	-	-	-	-	-	-	-
1981	1,520	0.0085	310	0.0418	730	0.0178	1,460	0.0171	-	-	-	-	550	0.0040	550	0.0184	-	-
1982	-30	0.0803	-60	0.0402	-	-	1,370	-	-	-	-	-	-	-	-420	0.0045	-	-
1983	-490	0.0509	-	-	-	-	-400	0.0623	-	-	-	-	-	-	-60	0.3240	-	-
1984	-90	0.2948	-280	0.0947	-90	0.2948	-	-	-	-	-	-	-	-	-420	0.0493	-	-
1985	820	0.0298	920	0.0266	910	0.0268	1,220	0.0200	-	-	-	-	1,430	0.0029	760	0.0251	-	-
1986	-	-	-	-	-	-	-240	0.1417	-	-	-	-	-270	0.0215	-550	0.0482	-	-
1987	2,260	0.0140	730	0.0434	970	0.0326	2,220	0.0143	-	-	-	-	1,180	0.0046	2,770	0.0089	-	-
1988	2,070	0.0123	70	0.3629	680	0.0374	370	0.0686	-	-	-	-	700	0.0062	1,250	0.0159	-	-
1989	2,160	0.0111	550	0.0436	520	0.0462	1,180	0.0203	-	-	-	-	1,130	0.0036	2,190	0.0085	-	-
1990	-	-	-	-	-60	0.2930	1,550	0.0977	-	-	-	-	-490	0.0061	-850	0.0161	-	-
1991	2,710	0.0103	1,100	0.0254	1,220	0.0229	60	0.0279	-	-	-	-	-	-	3,290	0.0066	-	-
1992	2,260	0.0167	1,040	0.0364	2,220	0.0170	1,710	0.0197	-	-	-	-	1,380	0.0047	1,400	0.0211	-	-
1993	-	-	-	-	-310	-	-310	-	-	-	-	-	1,710	0.0153	1,400	0.0211	-	-
1994	-	-	400	0.0689	450	0.0613	-	0.0185	-	-	-	-	60	0.0047	-730	0.0321	-1,800	0.0130
1995	-	-	890	0.0240	1,320	0.0162	1,100	0.0034	-	-	-	-	550	0.0086	2,010	0.0107	3,380	0.0064
1996	-	-	510	0.0009	670	0.0007	2,650	0.0004	-	-	-	-	1,840	0.0020	3,770	0.0044	4,060	0.0041
1997	-	-	-280	0.0340	-360	0.0264	-550	0.0528	0.0016	290	0.0016	-	370	0.0002	2,970	0.0001	2,820	0.0001
1998	-	-	-	-	-	-	1,460	0.0329	-15,070	0.0006	2,650	0.0559	-340	0.0048	-460	0.0161	-1,170	0.0063
1999	-	-	-	-	-	-	1,370	0.2412	-550	0.0520	-550	-	-290	0.0114	-	-	-1,300	0.0172
2000	-	-	-	-	-	-	1,550	0.0124	-790	0.0244	1,460	-	-50	0.0714	-	-	-1,250	0.0120
2001	-	-	-	-	-	-	60	0.0124	470	0.0526	1,550	0.0146	1,050	0.0040	-	-	-930	0.0175
Average	-	0.0603	-	0.0539	-	0.0584	-	0.0391	-	0.0262	-	0.0788	-	0.0089	-	0.0292	-	0.0092

Appendix A1 Calculated specific yield during June-September months (continued).

Year	Well G0292		Well MW0187		Well MW0224		Well MW0244		Well Q49		Well Q50		Well Q60		Well AUG2		Well G0781		Well G1020	
	$\Delta H(mm)$	$S_{y(wbA)}$	$\Delta H(mm)$	$S_{y(wbA)}$	$\Delta H(mm)$	$S_{y(wbA)}$	$\Delta H(mm)$	$S_{y(wbA)}$	$\Delta H(mm)$	$S_{y(wbA)}$	$\Delta H(mm)$	$S_{y(wbA)}$	$\Delta H(mm)$	$S_{y(wbA)}$	$\Delta H(mm)$	$S_{y(wbA)}$	$\Delta H(mm)$	$S_{y(wbA)}$	$\Delta H(mm)$	$S_{y(wbA)}$
1967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1970	-	-	-	-	-	-	-	-	-310	0.1049	-150	0.2168	-	-	-	0.0120	-	-	-	-
1971	-	-	-	-	-	-	-	-1,370	0.0203	-60	0.4630	-	-	-	-	0.3663	-	-	-	-
1972	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2087	-	-	-	-
1973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1167	-	-	-	-
1974	-	-	-	-	-	-	-	-	1,530	0.0011	-	-	-	-	-	-	-	-	-	-
1975	-	-	-	-	-	-	-	-820	0.0026	-	-	-	-	-	-	0.0041	-	-	-	-
1976	-	-	-	-	-	-	-	-150	0.0263	-	-	-	-	-	-	0.0044	-	-	-	-
1977	-	-	-	-	-	-	-	1,680	0.0048	-	-	-	-	-	-	0.0127	-	-	-	-
1978	-	-	-	-	-	-	-	-1,120	0.0305	-	-	-	-	-	-	0.0120	-	-	-	-
1979	-	-	-	-	-	-	-	-800	0.0316	-	-	-	-	-	-	0.0769	-	-	-	-
1980	-	-	-	-	-	-	-	-670	0.0340	-	-	-	-	-	-	0.1423	-	-	-	-
1981	-	-	-	-	-	-	-	-210	0.1133	-	-	-	-	-	-	-	-	-	-	-
1982	-	-	-	-	-	-	-	1,130	0.0087	-	-	-	-	-	-	0.1072	-	-	-	-
1983	-	-	-	-	-	-	-	-30	1.1893	-	-	-	-	-	-	-	-	-	-	-
1984	-	-	-	-	-	-	-	-310	0.0072	-	-	-	-	-	-	0.0276	-	-	-	-
1985	-	-	-	-	-	-	-	-700	0.0349	-	-	-	-	-	-	0.1005	-	-	-	-
1986	-	-	-	-	-	-	-	-490	0.0020	-	-	-	-	-	-	0.0250	-	-	-	-
1987	-	-	-	-	-	-	-	-270	0.0087	-	-	-	-	-	-	0.0459	-	-	-	-
1988	-	-	-	-	-	-	-	460	0.0163	-	-	-	-	-	-	-	-	-	-	-
1989	-	-	-	-	-	-	-	-370	0.0111	-	-	-	-	-	-	0.0076	-	-	-	-
1990	-	-	-	-	-	-	-	-180	0.1406	-	-	-	-	-	-	-	-	-	-	-
1991	-	-	-	-	-	-	-	-850	0.0064	-	-	-	-	-	-	-	-	-	-	-
1992	-	-	-	-	-	-	-	-2,040	0.0107	-	-	-	-	-	-	-	-	-	-	-
1993	-	-	-	-	-	-	-	860	0.0188	-	-	-	-	-	-	-	-	-	-	-
1994	-	-	-	-	-	-	-	-190	0.0771	-	-	-	-	-	-	-	-	-	-	-
1995	-	-	-	-	-	-	-	-450	0.0688	-	-	-	-	-	-	-	-	-	-	-
1996	500	0.0323	1,060	0.0152	900	0.0179	1,760	0.0092	860	0.0188	-	-	-	-	-	-	-	-	-	-
1997	-60	0.2440	-330	0.0444	-	-	-460	0.0318	-190	0.0771	-	-	-	-	-	-	-	-	-	-
1998	-	-	-1,470	0.0210	-	-	-970	0.0319	-450	0.0688	-	-	-	-	-	-	-	-	-	-
1999	-	-	-	-	-	-	-30	0.6080	-	-	-	-	-	-	-	-	-	-	-	-
2000	-50	0.3440	-	-	-	-	-620	0.0277	-810	0.0212	-	-	-	-	-	-	-	-	-	-
2001	600	0.0228	820	0.0167	-	-	830	0.0165	-	-	-	-	-	-	-	-	-	-	-	-
Average	-	0.1608	-	0.0209	-	0.0179	-	0.1209	-	0.0757	-	0.3399	-	0.0728	-	0.0748	-	0.0451	-	0.00010

Appendix A2 Calculated specific yield during July-September months.

Year	Well AUG1		Well AUG3		Well AUG5		Well G0135		Well G0263		Well G0486		Well G0147		Well AUG4		Well G0244	
	ΔH (mm)	$S_{y(WBA)}$	ΔH (mm)	$S_{y(WBA)}$	ΔH (mm)	$S_{y(WBA)}$	ΔH (mm)	$S_{y(WBA)}$	ΔH (mm)	$S_{y(WBA)}$	ΔH (mm)	$S_{y(WBA)}$	ΔH (mm)	$S_{y(WBA)}$	ΔH (mm)	S_y	ΔH (mm)	$S_{y(WBA)}$
1967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1969	1,550	0.1219	550	0.0682	370	0.1014	1,950	0.0969	-	-	-	430	0.4394	1,130	0.1672	-	-	
1970	60	1.2423	1,190	0.0124	340	0.0435	1,070	0.0697	-	-	-	490	0.1521	730	0.1021	-	-	
1971	-	-	-	-	240	0.0925	-	-	-	-	-	280	0.3997	880	0.1272	-	-	
1972	640	0.0470	280	0.0213	370	0.0161	1,070	0.0281	-	-	-	-	-	760	0.0395	-	-	
1973	-	-	-	-	-	-	-	-	-	-	-	60	1.4282	-	-	-	-	
1974	1,100	0.0956	210	0.0994	400	0.0522	1,130	0.0931	-	-	-	700	0.1503	800	0.1315	-	-	
1975	2,040	0.0662	820	0.0327	670	0.0400	1,100	0.1228	-	-	-	180	0.7504	1,190	0.1135	-	-	
1976	250	0.1245	330	0.0187	490	0.0126	1,220	0.0255	-	-	-	880	0.0354	850	0.0366	-	-	
1977	1,460	0.1257	700	0.0520	850	0.0428	1,440	0.1274	-	-	-	920	0.1994	1,680	0.1092	-	-	
1978	-	-	400	0.1524	520	0.1172	-	-	-	-	-	40	7.6767	-	-	-	-	
1979	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1980	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1981	940	0.1022	310	0.0615	460	0.0415	-	-	-	-	-	190	0.5056	250	0.3842	-	-	
1982	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1983	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1984	-	-	-280	0.0779	-	-	-	-	-	-	-	-	-	-180	0.6106	-	-	
1985	-	-	920	0.0165	450	0.0338	640	0.1196	-	-	-	850	0.0900	760	0.1007	-	-	
1986	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1987	2,260	0.0947	730	0.0582	910	0.0467	2,220	0.0964	-	-	-	1,180	0.1814	2,770	0.0773	-	-	
1988	-	-	-	-	-70	0.0770	-120	0.2262	-	-	-	-	0.4523	-	-	-	-	
1989	1,310	0.1200	340	0.0918	400	0.0780	640	0.2456	-	-	-	800	0.1965	2,190	0.0718	-	-	
1990	700	0.0310	580	0.0074	340	0.0127	700	0.0310	-	-	-	920	0.0236	1,370	0.0159	-	-	
1991	2,710	0.0668	1,100	0.0327	1,220	0.0295	940	0.1927	-	-	-	-	0.9534	3,290	0.0551	-	-	
1992	1,830	0.1447	820	0.0641	2,190	0.0240	1,310	0.2022	-	-	-	1,380	0.1919	1,400	0.1892	-	-	
1993	-	-	-	-	-	-	-	-	-	-	-	-60	0.6837	-510	0.0804	-	-	
1994	-	-	400	0.0765	450	0.0680	1,490	0.1034	-	-	-	520	0.2964	2,010	0.0767	3,380	0.0456	
1995	-	-	860	0.0322	1,320	0.0210	2,200	0.0634	-	-	-	950	0.1467	3,770	0.0370	4,060	0.0343	
1996	-	-	300	0.0428	-	1,130	0.0572	-	-	-	-	290	0.2230	-	-	-	-	
1997	-	-	710	0.0282	770	0.0260	850	0.1188	-	-	-	550	0.1836	470	0.0406	2,690	0.0375	
1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2001	-	-	-	-	-	-	1,540	0.1135	-630	0.0452	-	400	0.4369	230	-	-	-	
Average	-	0.1833	-	0.0523	-	0.0488	-	0.1123	470	0.3718	-	-	0.8173	-	0.1283	3,160	0.0553	0.0432

Appendix A2 Calculated specific yield during July-September months (continued).

Year	Well G0292		Well MW0187		Well MW0224		Well MW0244		Well Q49		Well Q50		Well Q60		Well AUG2		Well G0781		Well G1020	
	$\Delta H(mm)$	$S_{y(wbA)}$	$\Delta H(mm)$	$S_{y(wbA)}$	$\Delta H(mm)$	$S_{y(wbA)}$	$\Delta H(mm)$	$S_{y(wbA)}$	$\Delta H(mm)$	$S_{y(wbA)}$	$\Delta H(mm)$	$S_{y(wbA)}$	$\Delta H(mm)$	$S_{y(wbA)}$	$\Delta H(mm)$	$S_{y(wbA)}$	$\Delta H(mm)$	$S_{y(wbA)}$	$\Delta H(mm)$	$S_{y(wbA)}$
1967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1970	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1972	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1974	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1975	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1976	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1977	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1978	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1986	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1987	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1988	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	800	0.1742	2,960	0.0521	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	430	0.1504	4,620	0.0302	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	220	0.4591	3,140	0.0322	470	0.1376	1,760	0.0367	640	0.0156	760	0.0206	510	0.0133	860	0.0123	250	0.0423	1,460	0.00195
1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	540	0.3236	3,630	0.0481	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Average	-	0.2768	-	0.0450	-	0.1376	-	0.0998	-	0.0401	-	0.0356	-	0.0476	-	0.0437	-	0.0664	-	0.0028

Appendix A3 Calculated specific yield during July-October months.

Year	Well AUG1		Well AUG3		Well AUG5		Well G0135		Well G0263		Well G0486		Well G0147		Well AUG4		Well G0244	
	$\Delta H(mm)$	$S_{y(WBA)}$	$\Delta H(mm)$	$S_{y(WBA)}$	$\Delta H(mm)$	$S_{y(WBA)}$	$\Delta H(mm)$	$S_{y(WBA)}$	$\Delta H(mm)$	$S_{y(WBA)}$	$\Delta H(mm)$	$S_{y(WBA)}$	$\Delta H(mm)$	$S_{y(WBA)}$	$\Delta H(mm)$	$S_{y(WBA)}$	$\Delta H(mm)$	$S_{y(WBA)}$
1967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1969	2,010	0.0071	550	0.0259	370	0.0385	1,950	0.0073	-	-	-	-	430	0.0057	1,130	0.0098	-	-
1970	60	0.1498	1,190	0.0076	370	0.0243	1,070	0.0084	-	-	-	-	490	0.0031	730	0.0096	-	-
1971	670	0.0226	-	-	240	0.0631	1,120	0.0135	-	-	-	-	280	0.0092	880	0.0134	-	-
1972	-280	0.1181	-130	0.2543	-	-	-	-	-	-	-	-	-180	0.0314	-	-	-	-
1973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1974	2,230	0.0064	550	0.0260	640	0.0224	1,130	0.0127	-	-	-	-	1,010	0.0024	890	0.0126	-	-
1975	2,040	0.0128	820	0.0318	670	0.0389	1,100	0.0237	-	-	-	-	180	0.0247	1,190	0.0171	-	-
1976	1,650	0.0030	370	0.0132	910	0.0054	1,220	0.0040	-	-	-	-	1,040	0.0008	1,670	0.0023	-	-
1977	1,610	0.0164	700	0.0377	1,000	0.0264	1,440	0.0183	-	-	-	-	920	0.0049	1,680	0.0122	-	-
1978	-	-	400	0.0428	670	0.0256	-	-	-	-	-	-	250	0.0117	330	0.0405	-	-
1979	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	-390	0.0201	-130	0.0602	-	-	-	-	-	-	-	-	-	-	-280	0.0218	-	-
1982	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	-30	0.5453	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1984	-	-	-280	0.1105	-	-	-390	0.0793	-	-	-	-	-	-	-760	0.0168	-	-
1985	-	-	920	0.0040	850	0.0044	640	0.0058	-	-	-	-	-30	0.1763	-180	0.1341	-	-
1986	-	-	-60	0.5250	-	-	-570	0.0553	-	-	-	-	850	0.0007	2,620	0.0011	-	-
1987	2,260	0.0015	730	0.0046	1,070	0.0031	2,220	0.0015	-	-	-	-	1,180	0.0005	2,890	0.0009	-	-
1988	1,770	0.0240	40	1.0630	490	0.0868	370	0.1149	-	-	-	-	370	0.0196	950	0.0349	-	-
1989	1,310	0.0198	470	0.0551	700	0.0370	770	0.0336	-	-	-	-	1,040	0.0043	2,950	0.0068	-	-
1990	-60	0.3062	-	-	-	-	-	-	-	-	-	-	-340	0.0092	-300	0.0478	-	-
1991	2,950	0.0042	1,100	0.0114	1,460	0.0086	940	0.0133	-	-	-	310	0.0403	3,500	0.0028	-	-	
1992	1,830	0.0186	820	0.0415	2,190	0.0155	1,310	0.0260	-	-	-	2,590	0.0131	2,260	0.0026	3,600	0.0074	-
1993	-	-	-	-	-	-	-60	0.6880	-	-	-	-	-60	0.1177	-510	0.0631	-	-
1994	-	-	400	0.0286	450	0.0254	1,490	0.0077	-	-	-	520	0.0220	-	2,010	0.0044	-	-
1995	-	-	860	0.0037	1,320	0.0024	6,130	0.0005	0.0080	0.0080	0.0024	1,330	0.0024	1,840	0.0003	3,770	0.0007	0.0026
1996	-	-	300	0.0618	520	0.0357	1,130	0.0164	0.0640	0.0640	0.0640	290	0.0640	580	0.0055	2,970	0.0049	0.0006
1997	-	-	-80	0.1597	-	-	-120	0.1065	-13,730	0.0009	0.0752	-170	0.0752	-210	0.0104	-	-	0.0051
1998	-	-	-	-	-	-	-	-	-220	0.2277	-	-	-	-	-	-	-	-
1999	-	-	-	-	-	-	-80	0.1097	-630	0.0387	-	-	-70	0.0596	-	-	-	-
2000	-	-	-	-	-	-	1,540	0.0212	-1,270	0.0069	-	-	-170	0.0088	-	-	-	0.0326
2001	-	-	-	-	-	-	-	0.0622	520	0.0629	400	0.0817	500	0.0112	-	-	-210	0.0081
Average	-	-	-	0.1223	-	0.0273	-	0.0622	-	0.0584	-	0.0473	-	0.0226	-	0.0211	-	0.0098

Appendix A4 Calculated specific yield during August–November months.

Year	Well AUG1		Well AUG3		Well AUG5		Well G0135		Well G0263		Well G0486		Well G0147		Well AUG4		Well G0244	
	ΔH (mm)	$S_{y(wBd)}$	ΔH (mm)	$S_{y(wBd)}$	ΔH (mm)	$S_{y(wBd)}$	ΔH (mm)	$S_{y(wBd)}$	ΔH (mm)	$S_{y(wBd)}$	ΔH (mm)	$S_{y(wBd)}$	ΔH (mm)	$S_{y(wBd)}$	ΔH (mm)	$S_{y(wBd)}$	ΔH (mm)	$S_{y(wBd)}$
1967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1969	1,700	0.0020	60	0.0570	180	0.0190	-	-	-	-	-	-	120	0.0048	1,100	0.0024	-	-
1970	-950	0.0439	-670	0.0622	-340	0.1226	-2,040	0.0204	-	-	-	-	-730	0.0098	-1,040	0.0313	-	-
1971	-740	0.0481	-270	0.1319	-270	0.1319	-1,700	0.0210	-	-	-	-	-460	0.0132	-640	0.0434	-	-
1972	-	-	-130	0.0511	-30	0.2213	-180	0.0369	-	-	-	-	-190	0.0060	-340	0.0152	-	-
1973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1974	1,680	0.0013	430	0.0049	450	0.0047	1,370	0.0015	-	-	-	-	310	0.0012	490	0.0033	-	-
1975	-240	0.0115	-420	0.0066	-270	0.0103	-610	0.0045	-	-	-	-	-370	0.0013	-490	0.0044	-	-
1976	-	-	-	-	-240	0.0211	-480	0.0105	-	-	-	-	-490	0.0018	-120	0.0329	-	-
1977	1,460	0.0070	550	0.0187	510	0.0201	1,190	0.0086	-	-	-	-	580	0.0030	1,530	0.0052	-	-
1978	-	-	-120	0.3645	-300	0.1458	-	-	-	-	-	-	-520	0.0144	-550	0.0620	-	-
1979	-640	0.0506	-120	0.2700	-270	0.1200	-	-	-	-	-	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	-390	0.0782	-190	0.1605	-60	0.5083	-510	0.0598	-	-	-	-	-310	0.0168	-370	0.0643	-	-
1982	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	2,440	0.0051	580	0.0216	1,990	0.0063	980	0.0128	-	-	-	-	950	0.0023	2,770	0.0035	-	-
1984	-220	0.2080	-280	0.1634	-30	1.5250	-640	0.0715	-	-	-	-	-210	0.0372	-	-	-	-
1985	-	-	-	-	-	-	-190	0.0149	-	-	-	-	-90	0.0054	-	-	-	-
1986	-	-	-60	0.5225	850	0.0267	-700	0.0448	-	-	-	-	-370	0.0145	-	-	-	-
1987	890	0.0255	400	0.0567	850	0.0267	-	-	-	-	-	-	420	0.0092	1,920	0.0092	-	-
1988	-240	0.0054	-130	0.0099	-60	0.0215	-400	0.0032	-	-	-	-	-310	0.0007	-310	0.0032	-	-
1989	-820	0.0037	-370	0.0081	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1990	790	0.0122	610	0.0158	280	0.0344	700	0.0138	-	-	-	-	640	0.0026	2,800	0.0027	-	-
1991	2,040	0.0017	240	0.0144	1,120	0.0031	520	0.0067	-	-	-	-	-	-	3,500	0.0008	-	-
1992	-	-	-60	0.0873	-460	0.0114	-300	0.0175	-	-	-	-	-	-	-550	0.0074	-	-
1993	-	-	-	-	-	-	-60	0.5408	-	-	-	-	-	-	-	-	-	-
1994	-	-	-340	0.0204	-390	0.0178	-1,550	0.0045	-	-	-	-	-	-	-150	0.1687	-	-
1995	-	-	-550	0.0508	-510	0.0547	-920	0.0303	-	-	-	-	-	-	-730	0.0074	-	-
1996	-	-	120	0.1725	40	0.5175	240	0.0863	830	0.0249	-	-	-	-	-530	0.0411	-	-
1997	-	-	-290	0.0647	-20	0.9385	-570	0.0329	-	-	-	-	-	-	450	0.0359	-	-
1998	-	-	-	-	-	-	-960	0.0413	-	-	-	-	-	-	-540	0.0271	-	-
1999	-	-	-	-	-	-	-260	0.0900	-	-	-	-	-	-	-	-	-	-
2000	-	-	-	-	-	-	-80	0.2756	-	-	-	-	-	-	-	-	-	-
2001	-	-	-	-	-	-	-	-	870	0.0202	-	-	-	-	-	-	-	-
Average	-	0.0336	-	0.1015	-	0.2037	-	0.0604	-	0.0183	-	0.0612	-	0.0100	-	0.0272	-	0.0270

Appendix A4 Calculated specific yield during August-November months (continued).

Year	Well G0292		Well MW0187		Well MW0224		Well MW0244		Well Q49		Well Q50		Well Q60		Well AUG2		Well G0781		Well G1020	
	ΔH (mm)	$S_{y(WBd)}$	ΔH (mm)	$S_{y(WBd)}$	ΔH (mm)	$S_{y(WBd)}$	ΔH (mm)	$S_{y(WBd)}$	ΔH (mm)	$S_{y(WBd)}$	ΔH (mm)	$S_{y(WBd)}$	ΔH (mm)	$S_{y(WBd)}$	ΔH (mm)	$S_{y(WBd)}$	ΔH (mm)	$S_{y(WBd)}$	ΔH (mm)	$S_{y(WBd)}$
1967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1970	-	-	-310	0.1049	-150	0.2168	-150	0.2168	-310	0.1049	-150	0.2168	-150	0.2168	150	0.0120	-60	0.3663	-60	0.3663
1971	-	-	-1,370	0.0203	-60	0.4630	-60	0.4630	-1,370	0.0203	-60	0.4630	-60	0.4630	-90	0.2087	-90	0.2087	-90	0.2087
1972	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-30	0.1167	-30	0.1167	-30	0.1167
1973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1974	-	-	1,530	0.0011	-	-	-	-	1,530	0.0011	-	-	-	-	270	0.0041	270	0.0041	270	0.0041
1975	-	-	-820	0.0026	-	-	-	-	-820	0.0026	-	-	-	-	-330	0.0044	-330	0.0044	-330	0.0044
1976	-	-	-150	0.0263	-	-	-	-	-150	0.0263	-	-	-	-	-210	0.0127	-210	0.0127	-210	0.0127
1977	-	-	1,680	0.0048	-	-	-	-	1,680	0.0048	-	-	-	-	450	0.0120	450	0.0120	450	0.0120
1978	-	-	-1,120	0.0305	-	-	-	-	-1,120	0.0305	-	-	-	-	-300	0.0769	-300	0.0769	-300	0.0769
1979	-	-	-800	0.0316	-	-	-	-	-800	0.0316	-	-	-	-	-120	0.1423	-120	0.1423	-120	0.1423
1980	-	-	-670	0.0340	-	-	-	-	-670	0.0340	-	-	-	-	-	-	-	-	-	-
1981	-	-	-210	0.1133	-	-	-	-	-210	0.1133	-	-	-	-	-150	0.1072	-150	0.1072	-150	0.1072
1982	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	-	-	1,130	0.0087	-	-	-	-	1,130	0.0087	-	-	-	-	240	0.0276	240	0.0276	240	0.0276
1984	-	-	-30	1.1893	-	-	-	-	-30	1.1893	-	-	-	-	-240	0.1005	-240	0.1005	-240	0.1005
1985	-	-	-310	0.0072	-	-	-	-	-310	0.0072	-	-	-	-	-60	0.0250	-60	0.0250	-60	0.0250
1986	-	-	-700	0.0349	-	-	-	-	-700	0.0349	-	-	-	-	-360	0.0459	-360	0.0459	-360	0.0459
1987	-	-	370	0.0478	-	-	-	-	370	0.0478	-	-	-	-	-	-	-	-	-	-
1988	-	-	-490	0.0020	-	-	-	-	-490	0.0020	-	-	-	-	-90	0.0076	-90	0.0076	-90	0.0076
1989	-	-	-270	0.0087	-	-	-	-	-270	0.0087	-	-	-	-	-	-	-	-	-	-
1990	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1991	-	-	460	0.0163	-	-	-	-	460	0.0163	-	-	-	-	340	0.0221	340	0.0221	340	0.0221
1992	-	-	-540	0.0076	-	-	-	-	-540	0.0076	-	-	-	-	670	0.0040	670	0.0040	670	0.0040
1993	-	-	-1,340	0.0040	-	-	-	-	-1,340	0.0040	-	-	-	-	-270	0.0151	-270	0.0151	-270	0.0151
1994	-	-	-580	0.0376	-	-	-	-	-580	0.0376	-	-	-	-	-90	0.2812	-90	0.2812	-90	0.2812
1995	-	-	1,060	0.0152	-	-	-	-	1,060	0.0152	-	-	-	-	-450	0.0120	-450	0.0120	-450	0.0120
1996	500	0.0323	-330	0.0444	900	0.0179	-	-	-2,040	0.0107	-	-	-	-	-170	0.1281	-170	0.1281	-170	0.1281
1997	-60	0.2440	-1,470	0.0210	-	-	-	-	860	0.0188	-	-	-	-	510	0.0317	510	0.0317	510	0.0317
1998	-	-	-	-	-	-	-	-	-190	0.0771	-	-	-	-	-70	0.2091	-70	0.2091	-70	0.2091
1999	-	-	-	-	-	-	-	-	-450	0.0688	-	-	-	-	-370	0.0836	-370	0.0836	-370	0.0836
2000	-50	0.3440	820	0.0167	-	-	-	-	-810	0.0212	-	-	-	-	-	-	-	-	-	-
2001	600	0.0228	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Average	-	0.1608	-	0.0209	-	0.0179	-	0.1209	-	0.0757	-	0.3399	-	0.0728	-	0.0748	-	0.0451	-	0.00010

APPENDIX B
CALCULATED GROUNDWATER RECHARGE

Appendix B1 Calculated groundwater recharge (R_1) in mm/y using $S_{y(WBA)}$ and $\Delta h_{act,rec}$ parameters.

Appendix B2 Calculated groundwater recharge (R_2) in mm/y using $S_{y(WBA)}$ and $\Delta h_{act,hor}$ parameters.

Appendix B3 Calculated groundwater recharge (R_3) in mm/y using $S_{y(PTA)}$ and $\Delta h_{act,rec}$ parameters.

Appendix B4 Calculated groundwater recharge (R_4) in mm/y using $S_{y(PTA)}$ and $\Delta h_{act,hor}$ parameters.

Appendix B5 Calculated groundwater recharge (R_5) in mm/y using $S_{y(WBA)}$ and $\Delta h_{hyp,rec}$ parameters.

Appendix B6 Calculated groundwater recharge (R_6) in mm/y using $S_{y(WBA)}$ and $\Delta h_{hyp,hor}$ parameters.

Appendix B7 Calculated groundwater recharge (R_7) in mm/y using $S_{y(PTA)}$ and $\Delta h_{hyp,rec}$ parameters.

Appendix B8 Calculated groundwater recharge (R_8) in mm/y using $S_{y(PTA)}$ and $\Delta h_{hyp,hor}$ parameters.

Appendix B1 Calculated groundwater recharge (R_1) in mm/y using $S_{y(WBA)}$ and $\Delta h_{act,rec}$ parameters.

Year	AUG1		AUG3		AUG5		G0135		G0486	
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}
1967	-	-	-	-	-	-	168.71	207.44	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	167.90	206.44	63.88	78.55	-	-	247.34	304.11	-	-
1970	156.43	192.34	104.83	128.90	80.26	98.69	223.59	274.91	-	-
1971	282.56	347.42	60.61	74.52	64.70	79.55	230.96	283.97	-	-
1972	163.80	201.40	57.33	70.49	76.17	93.65	127.76	157.09	-	-
1973	183.46	225.57	50.78	62.43	52.42	64.45	169.53	208.45	-	-
1974	241.61	297.07	59.79	73.51	110.57	135.95	189.19	232.62	-	-
1975	364.46	448.12	87.63	107.75	94.19	115.81	150.70	185.29	-	-
1976	199.02	244.70	67.98	83.58	127.76	157.09	140.87	173.20	-	-
1977	189.19	232.62	73.71	90.63	113.02	138.97	138.41	170.18	-	-
1978	-	-	96.64	118.83	110.57	135.95	-	-	-	-
1979	446.36	548.82	71.25	87.61	195.74	240.67	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-
1981	262.08	322.24	77.81	95.67	138.41	170.18	185.09	227.58	-	-
1982	162.16	199.39	54.05	66.46	129.40	159.11	95.00	116.81	-	-
1983	528.26	649.52	90.09	110.77	193.28	237.65	170.35	209.46	-	-
1984	266.18	327.28	90.91	111.78	164.62	202.41	94.19	115.81	-	-
1985	308.76	379.64	125.31	154.07	161.34	198.38	120.39	148.03	-	-
1986	225.23	276.93	52.42	64.45	151.52	186.30	163.80	201.40	-	-
1987	293.20	360.51	90.09	110.77	141.69	174.21	222.77	273.90	-	-
1988	271.09	333.32	47.50	58.41	169.53	208.45	148.24	182.27	-	-
1989	321.87	395.75	85.18	104.73	161.34	198.38	157.25	193.34	-	-
1990	280.92	345.40	108.93	133.93	131.04	161.12	268.63	330.30	-	-
1991	293.20	360.51	157.25	193.34	152.33	187.30	100.74	123.86	33.58	41.29
1992	-	-	90.09	110.77	177.72	218.52	161.34	198.38	-	-
1993	-	-	-	-	-	-	86.00	105.74	24.57	30.21
1994	-	-	92.55	113.79	-	-	225.23	276.93	92.55	113.79
1995	-	-	55.69	68.48	144.14	177.23	204.75	251.75	112.20	137.96
1996	-	-	58.97	72.50	108.93	133.93	158.89	195.36	64.70	79.55
1997	-	-	101.56	124.87	131.04	161.12	159.71	196.37	123.67	152.06
1998	-	-	-	-	-	-	128.58	158.10	177.72	218.52
1999	-	-	-	-	-	-	108.93	133.93	-	-
2000	-	-	-	-	-	-	202.29	248.73	144.14	177.23
2001	-	-	-	-	-	-	197.38	242.69	269.45	331.30
Average	267.04	328.33	80.48	98.95	131.27	161.40	165.93	204.02	115.84	142.43

Appendix B1 Calculated groundwater recharge (R_1) in mm/y using $S_{y(WBA)}$ and $\Delta h_{act,rec}$ parameters (continued).

Year	G0147		AUG4		G0244		MW0187		MW0244	
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}
1967	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	20.50	30.95	-	-	-	-	-	-	-	-
1970	23.77	35.88	155.12	233.05	-	-	-	-	-	-
1971	35.70	53.90	138.46	208.01	-	-	-	-	-	-
1972	18.26	27.57	199.35	299.49	-	-	-	-	-	-
1973	13.06	19.71	121.15	182.01	-	-	-	-	-	-
1974	15.10	22.79	150.64	226.31	-	-	-	-	-	-
1975	8.57	12.94	130.12	195.49	-	-	-	-	-	-
1976	19.58	29.57	131.41	197.42	-	-	-	-	-	-
1977	11.32	17.09	180.12	270.60	-	-	-	-	-	-
1978	15.30	23.10	132.05	198.38	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-
1981	17.03	25.72	146.79	220.53	-	-	-	-	-	-
1982	-	-	139.74	209.93	-	-	-	-	-	-
1983	20.60	31.11	221.79	333.20	-	-	-	-	-	-
1984	12.34	18.63	233.32	350.53	-	-	-	-	-	-
1985	19.18	28.95	192.30	288.90	-	-	-	-	-	-
1986	17.24	26.03	336.53	505.58	-	-	-	-	-	-
1987	21.11	31.88	208.97	313.94	-	-	-	-	-	-
1988	16.42	24.79	125.00	187.79	-	-	-	-	-	-
1989	17.85	26.95	256.40	385.20	-	-	-	-	-	-
1990	21.22	32.03	262.17	393.87	-	-	-	-	-	-
1991	-	-	249.99	375.57	-	-	-	-	-	-
1992	22.85	34.50	244.86	367.87	-	-	651.26	978.41	-	-
1993	18.67	28.18	182.04	273.49	530.61	353.19	-	-	-	-
1994	20.60	31.11	296.78	445.87	730.92	486.52	-	-	-	-
1995	18.87	28.49	258.96	389.05	526.76	350.63	512.80	770.40	-	-
1996	14.48	21.87	217.30	326.46	524.84	349.35	487.16	731.88	220.50	331.27
1997	14.48	21.87	310.24	466.09	584.54	389.09	355.11	533.50	169.22	254.23
1998	-	-	-	-	597.06	397.42	382.68	574.91	223.71	336.09
1999	-	-	-	-	340.90	226.91	-	-	101.92	153.12
2000	8.16	12.32	-	-	589.36	392.29	927.53	1393.46	177.56	266.75
2001	19.69	29.72	-	-	764.62	508.95	906.37	1361.68	351.91	528.69
Average	17.85	26.95	200.83	301.72	576.62	383.82	603.27	906.32	207.47	311.69

Appendix B1 Calculated groundwater recharge (R_i) in mm/y using $S_{y(WBA)}$ and $\Delta h_{act,rec}$ parameters (continued).

Year	Q49		Q60		AUG2		G0781		G1020	
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}
1967	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-
1970	229.48	344.75	-	-	44.55	65.27	-	-	-	-
1971	94.87	142.52	-	-	31.30	45.86	-	-	-	-
1972	132.05	198.38	-	-	65.62	96.14	-	-	-	-
1973	203.84	306.23	-	-	41.54	60.86	-	-	-	-
1974	117.30	176.23	-	-	36.12	52.92	-	-	-	-
1975	173.71	260.97	-	-	116.19	170.23	-	-	-	-
1976	85.25	128.08	-	-	96.92	142.00	-	-	-	-
1977	130.12	195.49	-	-	80.07	117.31	-	-	-	-
1978	141.66	212.82	-	-	99.33	145.53	-	-	-	-
1979	149.99	225.34	-	-	95.72	140.24	-	-	-	-
1980	176.28	264.83	-	-	-	-	-	-	-	-
1981	123.71	185.86	-	-	154.71	226.67	-	-	-	-
1982	78.84	118.45	-	-	61.40	89.96	-	-	-	-
1983	107.05	160.82	-	-	174.58	255.78	-	-	-	-
1984	73.72	110.75	-	-	134.85	197.57	-	-	-	-
1985	91.66	137.71	-	-	65.62	96.14	-	-	-	-
1986	103.20	155.04	-	-	83.08	121.72	-	-	-	-
1987	94.87	142.52	-	-	59.60	87.32	-	-	-	-
1988	138.46	208.01	103.20	155.04	68.03	99.67	-	-	-	-
1989	98.71	148.30	88.46	132.89	85.48	125.24	-	-	-	-
1990	90.38	135.78	125.64	188.75	86.69	127.01	-	-	-	-
1991	101.92	153.12	57.69	86.67	114.38	167.58	85.48	125.24	1.14	43.28
1992	89.10	133.86	142.94	214.75	98.13	143.77	60.80	89.08	0.22	8.47
1993	39.74	59.71	76.92	115.56	78.26	114.66	54.18	79.38	0.82	31.01
1994	148.07	222.45	123.71	185.86	131.24	192.28	83.68	122.60	0.65	24.55
1995	200.63	301.42	119.87	180.08	107.16	157.00	48.16	70.56	0.64	24.47
1996	184.61	277.34	85.89	129.04	70.43	103.19	90.30	132.30	0.58	22.19
1997	102.56	154.08	99.36	149.27	66.82	97.90	55.38	81.14	0.29	10.87
1998	62.18	93.41	85.25	128.08	-	-	53.58	78.50	-	-
1999	-	-	52.56	78.97	-	-	-	-	0.07	2.81
2000	128.20	192.60	141.66	212.82	-	-	54.18	79.38	0.66	25.00
2001	119.87	180.08	92.95	139.64	-	-	84.88	124.36	1.51	57.42
Average	122.97	184.74	99.72	149.82	86.96	127.40	67.06	98.25	0.66	25.01

Appendix B2 Calculated groundwater recharge (R_2) in mm/y using $S_{y(WBA)}$ and $\Delta h_{act,hor}$ parameters.

Year	AUG1		AUG3		AUG5		G0135		G0486	
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}
1967	-	-	-	-	-	-	149.88	184.28	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	164.62	202.41	47.50	58.41	-	-	230.14	282.97	-	-
1970	142.51	175.22	102.38	125.88	74.53	91.64	220.31	270.88	-	-
1971	282.56	347.42	115.48	141.99	54.05	66.46	303.85	373.60	-	-
1972	147.42	181.26	47.50	58.41	69.62	85.60	117.94	145.01	-	-
1973	176.90	217.51	49.96	61.43	52.42	64.45	170.35	209.46	-	-
1974	221.95	272.90	52.42	64.45	95.00	116.81	177.72	218.52	-	-
1975	217.04	266.86	86.81	106.74	89.27	109.76	137.59	169.18	-	-
1976	171.99	211.47	59.79	73.51	107.29	131.92	126.95	156.09	-	-
1977	149.06	183.27	64.70	79.55	99.92	122.85	132.68	163.13	-	-
1978	-	-	80.26	98.69	104.83	128.90	-	-	-	-
1979	199.84	245.71	69.62	85.60	184.28	226.58	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-
1981	224.41	275.92	70.43	86.60	114.66	140.98	169.53	208.45	-	-
1982	131.86	162.13	47.50	58.41	122.03	150.04	84.36	103.72	-	-
1983	222.77	273.90	87.63	107.75	194.92	239.67	158.07	194.35	-	-
1984	244.88	301.09	85.18	104.73	127.76	157.09	79.44	97.68	-	-
1985	294.02	361.51	103.19	126.88	154.79	190.32	135.95	167.16	-	-
1986	185.09	227.58	47.50	58.41	136.77	168.17	117.12	144.00	-	-
1987	239.15	294.04	85.18	104.73	129.40	159.11	214.58	263.83	-	-
1988	245.70	302.10	47.50	58.41	150.70	185.29	135.14	166.16	-	-
1989	279.28	343.39	80.26	98.69	137.59	169.18	142.51	175.22	-	-
1990	244.88	301.09	72.07	88.62	188.37	231.61	279.28	343.39	-	-
1991	253.89	312.17	92.55	113.79	152.33	187.30	90.09	110.77	30.30	37.26
1992	-	-	87.63	107.75	181.82	223.55	157.25	193.34	-	-
1993	-	-	-	-	-	-	81.90	100.70	29.48	36.25
1994	-	-	87.63	107.75	-	-	194.10	238.66	82.72	101.71
1995	-	-	54.05	66.46	134.32	165.15	199.84	245.71	108.93	133.93
1996	-	-	46.68	57.40	97.46	119.83	144.96	178.24	49.14	60.42
1997	-	-	87.63	107.75	115.48	141.99	153.15	188.31	115.48	141.99
1998	-	-	-	-	-	-	185.09	227.58	154.79	190.32
1999	-	-	-	-	-	-	104.83	128.90	-	-
2000	-	-	-	-	-	-	196.56	241.68	135.14	166.16
2001	-	-	-	-	-	-	190.01	233.62	241.61	297.07
Average	211.42	259.95	72.56	89.21	122.78	150.97	160.68	197.57	105.29	129.46

Appendix B2 Calculated groundwater recharge (R_2) in mm/y using $S_{y(WBA)}$ and $\Delta h_{act,hor}$ parameters (continued).

Year	G0147		AUG4		G0244		MW0187		MW0244	
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}
1967	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	17.14	25.87	-	-	-	-	-	-	-	-
1970	21.73	32.80	123.07	184.90	-	-	-	-	-	-
1971	29.78	44.97	136.53	205.12	-	-	-	-	-	-
1972	15.61	23.56	150.64	226.31	-	-	-	-	-	-
1973	12.14	18.33	121.15	182.01	-	-	-	-	-	-
1974	13.36	20.17	133.33	200.30	-	-	-	-	-	-
1975	7.45	11.24	126.92	190.67	-	-	-	-	-	-
1976	17.75	26.80	112.82	169.49	-	-	-	-	-	-
1977	10.40	15.71	146.79	220.53	-	-	-	-	-	-
1978	13.77	20.79	123.07	184.90	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-
1981	14.99	22.64	139.74	209.93	-	-	-	-	-	-
1982	-	-	135.89	204.16	-	-	-	-	-	-
1983	18.67	28.18	216.66	325.49	-	-	-	-	-	-
1984	10.91	16.48	205.76	309.12	-	-	-	-	-	-
1985	17.34	26.18	187.17	281.20	-	-	-	-	-	-
1986	15.20	22.95	287.17	431.42	-	-	-	-	-	-
1987	19.48	29.41	189.10	284.09	-	-	-	-	-	-
1988	15.61	23.56	125.00	187.79	-	-	-	-	-	-
1989	16.83	25.41	189.10	284.09	-	-	-	-	-	-
1990	19.99	30.18	251.91	378.46	-	-	-	-	-	-
1991	-	-	246.14	369.79	-	-	-	-	-	-
1992	23.05	34.80	230.76	346.68	-	-	596.77	896.55	-	-
1993	18.67	28.18	175.63	263.86	308.96	464.17	-	-	-	-
1994	18.97	28.64	265.37	398.68	433.96	651.95	-	-	-	-
1995	17.14	25.87	241.66	363.05	308.32	463.20	439.73	660.62	-	-
1996	13.36	20.17	196.15	294.68	326.27	490.17	424.98	638.47	208.33	312.98
1997	12.55	18.94	285.89	429.50	346.14	520.02	391.01	587.43	167.30	251.34
1998	-	-	-	-	360.24	541.21	355.11	533.50	211.53	317.79
1999	-	-	-	-	233.32	350.53	-	-	99.36	149.27
2000	7.34	11.09	-	-	332.04	498.83	862.15	1,295.24	148.07	222.45
2001	16.52	24.95	-	-	442.93	665.43	849.97	1,276.94	297.42	446.83
Average	16.14	24.37	182.44	274.09	343.58	516.17	559.96	841.25	161.72	242.95

Appendix B2 Calculated groundwater recharge (R_2) in mm/y using $S_{y(WBA)}$ and $\Delta h_{act,hor}$ parameters (continued).

Year	Q49		Q60		AUG2		G0781		G1020	
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}
1967	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-
1970	179.48	269.64	-	-	43.95	64.39	-	-	-	-
1971	94.87	142.52	-	-	27.69	40.57	-	-	-	-
1972	119.23	179.12	-	-	43.95	64.39	-	-	-	-
1973	199.35	299.49	-	-	36.72	53.80	-	-	-	-
1974	115.38	173.34	-	-	34.92	51.16	-	-	-	-
1975	167.94	252.31	-	-	92.71	135.83	-	-	-	-
1976	75.00	112.67	-	-	68.03	99.67	-	-	-	-
1977	124.35	186.82	-	-	69.83	102.31	-	-	-	-
1978	138.46	208.01	-	-	71.64	104.96	-	-	-	-
1979	141.02	211.86	-	-	77.06	112.90	-	-	-	-
1980	164.10	246.53	-	-	-	-	-	-	-	-
1981	121.15	182.01	-	-	133.64	195.80	-	-	-	-
1982	68.59	103.04	-	-	47.56	69.68	-	-	-	-
1983	103.20	155.04	-	-	161.34	236.38	-	-	-	-
1984	68.59	103.04	-	-	98.73	144.65	-	-	-	-
1985	91.66	137.71	-	-	54.78	80.26	-	-	-	-
1986	99.36	149.27	-	-	57.19	83.79	-	-	-	-
1987	88.46	132.89	-	-	59.60	87.32	-	-	-	-
1988	126.92	190.67	95.51	143.49	65.62	96.14	-	-	-	-
1989	93.59	140.60	82.05	123.26	73.44	107.60	-	-	-	-
1990	89.74	134.82	94.23	141.56	77.66	113.78	-	-	-	-
1991	100.00	150.23	52.56	78.97	95.72	140.24	68.03	99.67	0.98	37.32
1992	85.89	129.04	130.76	196.45	93.31	136.71	56.59	82.91	0.13	4.86
1993	33.33	50.08	58.33	87.63	64.41	94.37	47.56	69.68	0.74	27.93
1994	139.10	208.97	123.71	185.86	106.55	156.11	52.98	77.62	0.56	21.13
1995	200.63	301.42	108.33	162.75	94.51	138.47	48.16	70.56	0.39	14.90
1996	150.64	226.31	85.89	129.04	64.41	94.37	57.19	83.79	0.44	16.61
1997	96.15	144.45	97.43	146.38	62.61	91.73	40.94	59.98	0.24	9.16
1998	55.13	82.82	77.56	116.52	-	-	52.37	76.73	-	-
1999	-	-	51.28	77.04	-	-	-	-	0.03	1.14
2000	105.77	158.90	132.05	198.38	-	-	47.56	69.68	0.52	19.87
2001	119.87	180.08	92.95	139.64	-	-	75.85	111.13	1.18	44.80
Average	114.74	172.38	91.62	137.64	73.24	107.31	54.72	80.18	0.52	19.77

Appendix B3 Calculated groundwater recharge (R_3) in mm/y using $S_{y(PTA)}$ and $\Delta h_{act,rec}$ parameters.

Year	AUG1		AUG3		AUG5		G0135		G0486	
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}
1967	-	-	-	-	-	-	157.80	617.18	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	157.03	614.18	59.75	233.69	-	-	231.33	904.79	-	-
1970	146.31	572.24	98.05	383.49	75.07	293.61	209.12	817.91	-	-
1971	264.27	1033.62	56.68	221.70	60.51	236.68	216.01	844.87	-	-
1972	153.20	599.20	53.62	209.72	71.24	278.63	119.50	467.38	-	-
1973	171.58	671.10	47.49	185.75	49.02	191.74	158.56	620.17	-	-
1974	225.97	883.82	55.92	218.71	103.41	404.46	176.95	692.08	-	-
1975	340.87	1333.22	81.96	320.57	88.09	344.54	140.94	551.26	-	-
1976	186.14	728.03	63.58	248.67	119.50	467.38	131.75	515.31	-	-
1977	176.95	692.08	68.94	269.64	105.71	413.45	129.45	506.32	-	-
1978	-	-	90.39	353.53	103.41	404.46	-	-	-	-
1979	417.47	1632.82	66.64	260.65	183.07	716.04	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-
1981	245.12	958.72	72.77	284.62	129.45	506.32	173.12	677.10	-	-
1982	151.67	593.21	50.56	197.74	121.03	473.37	88.86	347.54	-	-
1983	494.07	1932.42	84.26	329.56	180.78	707.06	159.33	623.17	-	-
1984	248.95	973.70	85.03	332.56	153.97	602.20	88.09	344.54	-	-
1985	288.78	1129.49	117.20	458.39	150.90	590.21	112.60	440.41	-	-
1986	210.65	823.90	49.02	191.74	141.71	554.26	153.20	599.20	-	-
1987	274.23	1072.57	84.26	329.56	132.52	518.31	208.35	814.91	-	-
1988	253.55	991.68	44.43	173.77	158.56	620.17	138.65	542.28	-	-
1989	301.04	1177.43	79.66	311.58	150.90	590.21	147.07	575.23	-	-
1990	262.74	1027.63	101.88	398.47	122.56	479.36	251.25	982.69	-	-
1991	274.23	1072.57	147.07	575.23	142.48	557.26	94.22	368.51	31.41	122.84
1992	-	-	84.26	329.56	166.22	650.13	150.90	590.21	-	-
1993	-	-	-	-	-	-	80.43	314.58	22.98	89.88
1994	-	-	86.56	338.55	-	-	210.65	823.90	86.56	338.55
1995	-	-	52.09	203.73	134.82	527.30	191.50	749.00	104.94	410.45
1996	-	-	55.15	215.71	101.88	398.47	148.60	581.22	60.51	236.68
1997	-	-	94.98	371.50	122.56	479.36	149.37	584.22	115.67	452.40
1998	-	-	-	-	-	-	120.26	470.37	166.22	650.13
1999	-	-	-	-	-	-	101.88	398.47	-	-
2000	-	-	-	-	-	-	189.20	740.01	134.82	527.30
2001	-	-	-	-	-	-	184.61	722.04	252.01	985.68
Average	249.75	976.84	75.27	294.38	122.77	480.20	155.28	607.32	108.35	423.77

Appendix B3 Calculated groundwater recharge (R_3) in mm/y using $S_{y(PTA)}$ and $\Delta h_{act,rec}$ parameters (continued).

Year	G0147		AUG4		G0244		MW0187		MW0244	
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}
1967	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	307.93	411.45	-	-	-	-	-	-	-	-
1970	356.96	476.95	170.13	793.76	-	-	-	-	-	-
1971	536.20	716.45	151.85	708.48	-	-	-	-	-	-
1972	274.23	366.41	218.63	1020.08	-	-	-	-	-	-
1973	196.10	262.02	132.87	619.92	-	-	-	-	-	-
1974	226.74	302.96	165.21	770.80	-	-	-	-	-	-
1975	128.69	171.95	142.71	665.84	-	-	-	-	-	-
1976	294.14	393.02	144.12	672.40	-	-	-	-	-	-
1977	170.05	227.22	197.54	921.68	-	-	-	-	-	-
1978	229.80	307.05	144.82	675.68	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-
1981	255.84	341.85	160.99	751.12	-	-	-	-	-	-
1982	-	-	153.25	715.04	-	-	-	-	-	-
1983	309.46	413.49	243.24	1134.88	-	-	-	-	-	-
1984	185.37	247.69	255.89	1193.92	-	-	-	-	-	-
1985	288.02	384.84	210.90	984.00	-	-	-	-	-	-
1986	258.91	345.94	369.08	1722.00	-	-	-	-	-	-
1987	317.12	423.73	229.18	1069.28	-	-	-	-	-	-
1988	246.65	329.57	137.09	639.60	-	-	-	-	-	-
1989	268.10	358.23	281.20	1312.00	-	-	-	-	-	-
1990	318.66	425.78	287.53	1341.52	-	-	-	-	-	-
1991	-	-	274.17	1279.20	-	-	-	-	-	-
1992	343.17	458.53	268.55	1252.96	-	-	714.25	3332.48	-	-
1993	280.36	374.60	199.65	931.52	387.35	1807.28	-	-	-	-
1994	309.46	413.49	325.49	1518.64	533.58	2489.52	-	-	-	-
1995	283.42	378.70	284.01	1325.12	384.54	1794.16	562.40	2624.00	-	-
1996	217.54	290.67	238.32	1111.92	383.14	1787.60	534.28	2492.80	241.83	1128.32
1997	217.54	290.67	340.25	1587.52	426.72	1990.96	389.46	1817.12	185.59	865.92
1998	-	-	-	-	435.86	2033.60	419.69	1958.16	245.35	1144.72
1999	-	-	-	-	248.86	1161.12	-	-	111.78	521.52
2000	122.56	163.76	-	-	430.24	2007.36	1017.24	4746.16	194.73	908.56
2001	295.68	395.07	-	-	558.18	2604.32	994.04	4637.92	385.95	1800.72
Average	268.10	358.23	220.26	1027.65	420.94	1963.99	661.62	3086.95	227.54	1061.63

Appendix B3 Calculated groundwater recharge (R_3) in mm/y using $S_{y(PTA)}$ and $\Delta h_{act,rec}$ parameters (continued).

Year	Q49		Q60		AUG2		G0781		G1020
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R
1967	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-
1970	251.67	1174.24	-	-	72.15	216.15	-	-	-
1971	104.04	485.44	-	-	50.70	151.89	-	-	-
1972	144.82	675.68	-	-	106.28	318.39	-	-	-
1973	223.55	1043.04	-	-	67.28	201.55	-	-	-
1974	128.65	600.24	-	-	58.50	175.26	-	-	-
1975	190.51	888.88	-	-	188.18	563.75	-	-	-
1976	93.50	436.24	-	-	156.98	470.28	-	-	-
1977	142.71	665.84	-	-	129.68	388.49	-	-	-
1978	155.36	724.88	-	-	160.88	481.97	-	-	-
1979	164.50	767.52	-	-	155.03	464.44	-	-	-
1980	193.33	902.00	-	-	-	-	-	-	-
1981	135.68	633.04	-	-	250.58	750.70	-	-	-
1982	86.47	403.44	-	-	99.45	297.94	-	-	-
1983	117.40	547.76	-	-	282.75	847.09	-	-	-
1984	80.85	377.20	-	-	218.40	654.30	-	-	-
1985	100.53	469.04	-	-	106.28	318.39	-	-	-
1986	113.18	528.08	-	-	134.55	403.10	-	-	-
1987	104.04	485.44	-	-	96.53	289.18	-	-	-
1988	151.85	708.48	113.18	528.08	110.18	330.07	-	-	-
1989	108.26	505.12	97.01	452.64	138.45	414.78	-	-	-
1990	99.12	462.48	137.79	642.88	140.40	420.62	-	-	-
1991	111.78	521.52	63.27	295.20	185.25	554.99	138.45	414.78	3175.53
1992	97.72	455.92	156.77	731.44	158.93	476.12	98.48	295.02	621.72
1993	220.04	1026.64	84.36	393.60	126.75	379.73	87.75	262.89	2275.01
1994	162.39	757.68	135.68	633.04	212.55	636.78	135.53	406.02	1801.05
1995	113.18	528.08	131.46	613.36	173.55	519.94	78.00	233.68	1795.47
1996	202.46	944.64	94.20	439.52	114.08	341.76	146.25	438.15	1628.19
1997	112.48	524.80	108.97	508.40	108.23	324.23	89.70	268.73	797.37
1998	68.19	318.16	93.50	436.24	-	-	86.78	259.97	-
1999	-	-	57.65	268.96	-	-	-	-	206.31
2000	140.60	656.00	155.36	724.88	-	-	87.75	262.89	1834.50
2001	131.46	613.36	101.94	475.60	-	-	137.48	411.86	4212.67
Average	137.11	639.71	109.37	510.27	140.84	421.92	108.62	325.40	1834.78

Appendix B4 Calculated groundwater recharge (R_q) in mm/y using $S_{y(PTA)}$ and $\Delta h_{act,hor}$ parameters.

Year	AUG1		AUG3		AUG5		G0135		G0486	
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}
1967	-	-	-	-	-	-	140.18	548.27	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	153.97	602.20	44.43	173.77	-	-	215.25	841.88	-	-
1970	133.28	521.30	95.75	374.50	69.71	272.64	206.05	805.92	-	-
1971	264.27	1,033.62	108.01	422.44	50.56	197.74	284.19	1,111.52	-	-
1972	137.88	539.28	44.43	173.77	65.11	254.66	110.30	431.42	-	-
1973	165.46	647.14	46.73	182.76	49.02	191.74	159.33	623.17	-	-
1974	207.59	811.92	49.02	191.74	88.86	347.54	166.22	650.13	-	-
1975	202.99	793.94	81.20	317.58	83.49	326.56	128.69	503.33	-	-
1976	160.86	629.16	55.92	218.71	100.35	392.48	118.73	464.38	-	-
1977	139.41	545.27	60.51	236.68	93.45	365.51	124.09	485.35	-	-
1978	-	-	75.07	293.61	98.05	383.49	-	-	-	-
1979	186.90	731.02	65.11	254.66	172.35	674.10	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-
1981	209.88	820.90	65.88	257.66	107.24	419.44	158.56	620.17	-	-
1982	123.33	482.36	44.43	173.77	114.13	446.40	78.90	308.59	-	-
1983	208.35	814.91	81.96	320.57	182.31	713.05	147.84	578.23	-	-
1984	229.03	895.80	79.66	311.58	119.50	467.38	74.30	290.61	-	-
1985	274.99	1,075.56	96.52	377.50	144.77	566.24	127.16	497.34	-	-
1986	173.12	677.10	44.43	173.77	127.92	500.33	109.54	428.43	-	-
1987	223.67	874.83	79.66	311.58	121.03	473.37	200.69	784.95	-	-
1988	229.80	898.80	44.43	173.77	140.94	551.26	126.39	494.34	-	-
1989	261.21	1,021.64	75.07	293.61	128.69	503.33	133.28	521.30	-	-
1990	229.03	895.80	67.41	263.65	176.18	689.08	261.21	1,021.64	-	-
1991	237.46	928.76	86.56	338.55	142.48	557.26	84.26	329.56	28.34	110.85
1992	-	-	81.96	320.57	170.05	665.11	147.07	575.23	-	-
1993	-	-	-	-	-	-	76.60	299.60	27.58	107.86
1994	-	-	81.96	320.57	-	-	181.54	710.05	77.37	302.60
1995	-	-	50.56	197.74	125.62	491.34	186.90	731.02	101.88	398.47
1996	-	-	43.66	170.77	91.15	356.52	135.58	530.29	45.96	179.76
1997	-	-	81.96	320.57	108.01	422.44	143.24	560.25	108.01	422.44
1998	-	-	-	-	-	-	173.12	677.10	144.77	566.24
1999	-	-	-	-	-	-	98.05	383.49	-	-
2000	-	-	-	-	-	-	183.84	719.04	126.39	494.34
2001	-	-	-	-	-	-	177.71	695.07	225.97	883.82
Average	197.74	773.40	67.86	265.42	114.84	449.16	150.28	587.80	98.47	385.15

Appendix B4 Calculated groundwater recharge (R_q) in mm/y using $S_{y(PTA)}$ and $\Delta h_{act,hor}$ parameters (continued).

Year	G0147		AUG4		G0244		MW0187		MW0244	
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}
1967	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	257.38	343.90	-	-	-	-	-	-	-	-
1970	326.32	436.01	134.98	629.76	-	-	-	-	-	-
1971	447.34	597.72	149.74	698.64	-	-	-	-	-	-
1972	234.40	313.19	165.21	770.80	-	-	-	-	-	-
1973	182.31	243.59	132.87	619.92	-	-	-	-	-	-
1974	200.69	268.16	146.22	682.24	-	-	-	-	-	-
1975	111.84	149.43	139.19	649.44	-	-	-	-	-	-
1976	266.57	356.18	123.73	577.28	-	-	-	-	-	-
1977	156.26	208.79	160.99	751.12	-	-	-	-	-	-
1978	206.82	276.35	134.98	629.76	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-
1981	225.20	300.91	153.25	715.04	-	-	-	-	-	-
1982	-	-	149.04	695.36	-	-	-	-	-	-
1983	280.36	374.60	237.61	1,108.64	-	-	-	-	-	-
1984	163.92	219.03	225.66	1,052.88	-	-	-	-	-	-
1985	260.44	347.99	205.28	957.76	-	-	-	-	-	-
1986	228.27	305.00	314.94	1,469.44	-	-	-	-	-	-
1987	292.61	390.98	207.39	967.60	-	-	-	-	-	-
1988	234.40	313.19	137.09	639.60	-	-	-	-	-	-
1989	252.78	337.76	207.39	967.60	-	-	-	-	-	-
1990	300.27	401.21	276.28	1,289.04	-	-	-	-	-	-
1991	-	-	269.95	1,259.52	-	-	-	-	-	-
1992	346.23	462.62	253.08	1,180.80	-	-	654.49	3,053.68	-	-
1993	280.36	374.60	192.62	898.72	338.85	1,580.96	-	-	-	-
1994	284.95	380.74	291.04	1,357.92	475.93	2,220.56	-	-	-	-
1995	257.38	343.90	265.03	1,236.56	338.14	1,577.68	482.26	2,250.08	-	-
1996	200.69	268.16	215.12	1,003.68	357.83	1,669.52	466.09	2,174.64	228.48	1,066.00
1997	188.44	251.78	313.54	1,462.88	379.62	1,771.20	428.83	2,000.80	183.48	856.08
1998	-	-	-	-	395.09	1,843.36	389.46	1,817.12	231.99	1,082.40
1999	-	-	-	-	255.89	1,193.92	-	-	108.97	508.40
2000	110.30	147.38	-	-	364.15	1,699.04	945.54	4,411.60	162.39	757.68
2001	248.18	331.61	-	-	485.77	2,266.48	932.18	4,349.28	326.19	1,521.92
Average	242.40	323.88	200.09	933.54	376.81	1,758.08	614.12	2,865.31	206.92	965.41

Appendix B4 Calculated groundwater recharge (R_4) in mm/y using $S_{y(PTA)}$ and $\Delta h_{act,hor}$ parameters (continued).

Year	Q49		Q60		AUG2		G0781		G1020
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	
1967	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-
1970	196.84	918.40	-	-	71.18	213.23	-	-	-
1971	104.04	485.44	-	-	44.85	134.37	-	-	-
1972	130.76	610.08	-	-	71.18	213.23	-	-	-
1973	218.63	1,020.08	-	-	59.48	178.18	-	-	-
1974	126.54	590.40	-	-	56.55	169.42	-	-	-
1975	184.19	859.36	-	-	150.15	449.83	-	-	-
1976	82.25	383.76	-	-	110.18	330.07	-	-	-
1977	136.38	636.32	-	-	113.10	338.84	-	-	-
1978	151.85	708.48	-	-	116.03	347.60	-	-	-
1979	154.66	721.60	-	-	124.80	373.89	-	-	-
1980	179.97	839.68	-	-	-	-	-	-	-
1981	132.87	619.92	-	-	216.45	648.46	-	-	-
1982	75.22	350.96	-	-	77.03	230.76	-	-	-
1983	113.18	528.08	-	-	261.30	782.83	-	-	-
1984	75.22	350.96	-	-	159.90	479.04	-	-	-
1985	100.53	469.04	-	-	88.73	265.81	-	-	-
1986	108.97	508.40	-	-	92.63	277.50	-	-	-
1987	97.01	452.64	-	-	96.53	289.18	-	-	-
1988	139.19	649.44	104.75	488.72	106.28	318.39	-	-	-
1989	102.64	478.88	89.98	419.84	118.95	356.36	-	-	-
1990	98.42	459.20	103.34	482.16	125.78	376.81	-	-	-
1991	109.67	511.68	57.65	268.96	155.03	464.44	110.18	330.07	2,737.82
1992	94.20	439.52	143.41	669.12	151.13	452.76	91.65	274.57	356.86
1993	36.56	170.56	63.97	298.48	104.33	312.55	77.03	230.76	2,049.18
1994	152.55	711.76	135.68	633.04	172.58	517.02	85.80	257.05	1,550.13
1995	220.04	1,026.64	118.81	554.32	153.08	458.60	78.00	233.68	1,092.90
1996	165.21	770.80	94.20	439.52	104.33	312.55	92.63	277.50	1,218.36
1997	105.45	492.00	106.86	498.56	101.40	303.78	66.30	198.63	671.91
1998	60.46	282.08	85.06	396.88	-	-	84.83	254.13	-
1999	-	-	56.24	262.40	-	-	-	-	83.64
2000	116.00	541.20	144.82	675.68	-	-	77.03	230.76	1,458.12
2001	131.46	613.36	101.94	475.60	-	-	122.85	368.05	3,287.05
Ave	125.84	587.12	100.48	468.81	118.63	355.39	88.63	265.52	1,450.60

Appendix B5 Calculated groundwater recharge (R_s) in mm/y using $S_{y(WBA)}$ and $\Delta h_{hyp,rec}$ parameters.

Year	AUG1		AUG3		AUG5		G0135		G0486	
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}
1967	-	-	-	-	-	-	146.59	180.24	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	167.90	206.44	63.88	78.55	-	-	247.34	304.11	-	-
1970	156.43	192.34	104.83	128.90	80.26	98.69	223.59	274.91	-	-
1971	282.56	347.42	45.87	56.40	64.70	79.55	230.96	283.97	-	-
1972	151.52	186.30	36.04	44.31	73.72	90.63	103.19	126.88	-	-
1973	183.46	225.57	50.78	62.43	52.42	64.45	169.53	208.45	-	-
1974	195.75	240.69	48.32	59.41	57.33	70.49	167.89	206.43	-	-
1975	364.46	448.12	87.63	107.75	94.19	115.81	150.70	185.29	-	-
1976	199.02	244.70	67.98	83.58	127.76	157.09	140.87	173.20	-	-
1977	189.19	232.62	64.70	79.56	92.54	113.79	124.49	153.06	-	-
1978	-	-	96.64	118.83	110.57	135.95	-	-	-	-
1979	446.36	548.82	71.25	87.61	195.74	240.67	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-
1981	262.08	322.24	77.81	95.67	124.49	153.06	185.09	227.58	-	-
1982	88.46	108.77	13.10	16.11	129.40	159.11	95.00	116.81	-	-
1983	463.81	570.28	90.09	110.77	193.28	237.65	130.22	160.11	-	-
1984	194.10	238.65	90.91	111.78	91.73	112.78	94.19	115.81	-	-
1985	187.54	230.59	125.31	154.07	161.34	198.38	120.39	148.03	-	-
1986	225.23	276.93	48.33	59.42	112.20	137.96	163.80	201.40	-	-
1987	228.49	280.95	62.24	76.53	141.69	174.21	183.45	225.56	-	-
1988	271.09	333.32	47.50	58.41	169.53	208.45	148.24	182.27	-	-
1989	321.87	395.75	67.16	82.58	161.34	198.38	157.25	193.34	-	-
1990	280.92	345.40	108.93	133.93	131.04	161.12	127.76	157.09	-	-
1991	265.35	326.26	94.19	115.81	117.11	144.00	100.74	123.86	33.58	41.29
1992	-	-	90.09	110.77	177.72	218.52	161.34	198.38	-	-
1993	-	-	-	-	-	-	86.00	105.74	16.38	20.14
1994	-	-	92.55	113.79	-	-	225.23	276.93	92.55	113.79
1995	-	-	55.69	68.48	144.14	177.23	204.75	251.75	112.20	137.96
1996	-	-	58.97	72.50	108.93	133.93	158.89	195.36	64.70	79.55
1997	-	-	94.19	115.80	104.83	128.90	159.71	196.37	123.67	152.06
1998	-	-	-	-	-	-	99.92	122.86	111.38	136.95
1999	-	-	-	-	-	-	108.93	133.93	-	-
2000	-	-	-	-	-	-	202.29	248.73	144.14	177.23
2001	-	-	-	-	-	-	178.55	219.54	218.69	268.88
Average	244.08	300.10	72.41	89.03	120.72	148.43	154.74	190.26	101.92	125.32

Appendix B5 Calculated groundwater recharge (R_s) in mm/y using $S_{y(WBA)}$ and $\Delta h_{hyp,rec}$ parameters (continued):

Year	G0147		AUG4		G0244		MW0187		MW0244	
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}
1967	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	20.50	30.95	-	-	-	-	-	-	-	-
1970	23.77	35.88	155.12	233.05	-	-	-	-	-	-
1971	35.70	53.90	138.46	208.01	-	-	-	-	-	-
1972	11.63	17.56	141.66	212.82	-	-	-	-	-	-
1973	13.06	19.71	121.15	182.01	-	-	-	-	-	-
1974	11.73	17.71	57.70	86.68	-	-	-	-	-	-
1975	8.57	12.94	130.12	195.49	-	-	-	-	-	-
1976	19.58	29.57	131.41	197.42	-	-	-	-	-	-
1977	9.99	15.09	128.19	192.59	-	-	-	-	-	-
1978	15.30	23.10	132.05	198.38	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-
1981	17.03	25.72	146.79	220.53	-	-	-	-	-	-
1982	-	-	69.87	104.97	-	-	-	-	-	-
1983	20.60	31.11	221.79	333.20	-	-	-	-	-	-
1984	12.34	18.63	220.51	331.29	-	-	-	-	-	-
1985	19.18	28.95	192.30	288.90	-	-	-	-	-	-
1986	14.59	22.03	182.70	274.48	-	-	-	-	-	-
1987	15.30	23.10	188.45	283.11	-	-	-	-	-	-
1988	16.42	24.79	125.00	187.79	-	-	-	-	-	-
1989	17.85	26.95	256.40	385.20	-	-	-	-	-	-
1990	21.22	32.03	262.17	393.87	-	-	-	-	-	-
1991	-	-	226.92	340.90	-	-	-	-	-	-
1992	22.85	34.50	244.86	367.87	-	-	488.45	733.81	-	-
1993	18.67	28.18	182.04	273.49	454.52	302.54	-	-	-	-
1994	20.60	31.11	296.78	445.87	730.92	486.52	-	-	-	-
1995	14.69	22.18	258.96	389.05	526.76	350.63	373.06	560.47	-	-
1996	14.48	21.87	217.30	326.46	524.84	349.35	487.16	731.88	220.50	331.27
1997	14.48	21.87	310.24	466.09	463.19	308.31	258.34	388.12	169.22	254.23
1998	-	-	-	-	463.20	308.32	291.03	437.22	180.13	270.62
1999	-	-	-	-	340.90	226.91	-	-	101.92	153.12
2000	8.16	12.32	-	-	589.36	392.29	927.53	1393.46	177.56	266.75
2001	18.87	28.49	-	-	574.92	382.68	906.37	1361.68	325.62	489.20
Average	16.93	25.56	182.27	273.83	518.73	345.28	533.13	800.95	195.83	294.20

Appendix B5 Calculated groundwater recharge (R_s) in mm/y using $S_{y(WBA)}$ and $\Delta h_{hyp,rec}$ parameters (continued).

Year	Q49		Q60		AUG2		G0781		G1020	
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}
1967	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-
1970	229.48	344.75	-	-	44.55	65.27	-	-	-	-
1971	94.87	142.52	-	-	31.30	45.86	-	-	-	-
1972	114.10	171.42	-	-	65.62	96.14	-	-	-	-
1973	203.84	306.23	-	-	41.54	60.86	-	-	-	-
1974	117.30	176.23	-	-	36.12	52.92	-	-	-	-
1975	173.71	260.97	-	-	85.49	125.26	-	-	-	-
1976	85.25	128.08	-	-	96.92	142.00	-	-	-	-
1977	108.96	163.70	-	-	64.42	94.38	-	-	-	-
1978	141.66	212.82	-	-	99.33	145.53	-	-	-	-
1979	149.99	225.34	-	-	95.72	140.24	-	-	-	-
1980	176.28	264.83	-	-	-	-	-	-	-	-
1981	123.71	185.86	-	-	154.71	226.67	-	-	-	-
1982	48.72	73.19	-	-	61.40	89.96	-	-	-	-
1983	107.05	160.82	-	-	54.17	79.37	-	-	-	-
1984	72.44	108.82	-	-	134.85	197.57	-	-	-	-
1985	91.66	137.71	-	-	65.62	96.14	-	-	-	-
1986	103.20	155.04	-	-	58.40	85.56	-	-	-	-
1987	94.87	142.52	-	-	59.60	87.32	-	-	-	-
1988	138.46	208.01	103.20	155.04	68.03	99.67	-	-	-	-
1989	98.71	148.30	88.46	132.89	85.48	125.24	-	-	-	-
1990	90.38	135.78	125.64	188.75	86.69	127.01	-	-	-	-
1991	101.92	153.12	57.69	86.67	114.38	167.58	85.48	125.24	1.14	43.28
1992	89.10	133.86	142.94	214.75	98.13	143.77	60.80	89.08	0.22	8.47
1993	26.28	39.49	76.92	115.56	78.26	114.66	54.18	79.38	0.82	31.01
1994	148.07	222.45	123.71	185.86	109.57	160.53	83.68	122.60	0.37	14.10
1995	200.63	301.42	119.87	180.08	83.68	122.60	48.16	70.56	0.64	24.47
1996	184.61	277.34	85.89	129.04	63.81	93.49	90.30	132.30	0.58	22.19
1997	102.56	154.08	80.77	121.34	66.82	97.90	55.38	81.14	0.29	10.87
1998	62.18	93.41	85.25	128.08	-	-	40.34	59.09	-	-
1999	0.00	0.00	52.56	78.97	-	-	-	-	0.07	2.81
2000	128.20	192.60	141.66	212.82	-	-	54.18	79.38	0.66	25.00
2001	119.87	180.08	92.95	139.64	-	-	67.42	98.78	1.51	57.42
Average	120.26	180.67	98.39	147.82	77.95	114.20	63.99	93.76	0.63	23.96

Appendix B6 Calculated groundwater recharge (R_g) in mm/y using $S_{y(WBA)}$ and $\Delta h_{hyp,hor}$ parameters.

Year	AUG1		AUG3		AUG5		G0135		G0486	
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{min}
1967	-	-	-	-	-	-	135.13	166.15	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	164.62	202.41	47.50	58.41	-	-	230.14	282.97	-	-
1970	142.51	175.22	102.38	125.88	74.53	91.64	220.31	270.88	-	-
1971	282.56	347.42	35.22	43.31	54.05	66.46	303.85	373.60	-	-
1972	142.51	175.22	30.31	37.27	67.18	82.6	97.47	119.84	-	-
1973	176.90	217.51	49.96	61.43	52.42	64.45	170.35	209.46	-	-
1974	221.95	272.90	45.05	55.39	49.26	60.57	157.25	193.35	-	-
1975	217.04	266.86	86.81	106.74	89.27	109.76	137.59	169.18	-	-
1976	171.99	211.47	59.79	73.51	107.29	131.92	126.95	156.09	-	-
1977	149.06	183.27	57.33	70.49	81.90	100.70	117.94	145.01	-	-
1978	-	-	80.26	98.69	104.83	128.90	-	-	-	-
1979	199.84	245.71	69.62	85.60	184.28	226.58	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-
1981	224.41	275.92	70.43	86.60	103.13	126.80	169.53	208.45	-	-
1982	69.62	85.60	12.28	15.1	122.03	150.04	84.36	103.72	-	-
1983	199.85	245.72	87.63	107.75	194.92	239.67	125.30	154.06	-	-
1984	177.73	218.53	85.18	104.73	77.81	95.67	79.44	97.68	-	-
1985	184.26	226.56	103.19	126.88	154.79	190.32	135.95	167.16	-	-
1986	185.09	227.58	43.79	53.85	102.37	125.88	89.27	109.76	-	-
1987	192.47	236.64	59.79	73.51	129.40	159.11	181.81	223.54	-	-
1988	245.70	302.10	47.50	58.41	150.70	185.29	135.14	166.16	-	-
1989	279.28	343.39	65.52	80.56	137.59	169.18	142.51	175.22	-	-
1990	244.88	301.09	72.07	88.62	188.37	231.61	132.83	163.32	-	-
1991	241.63	297.09	90.10	110.77	117.11	144.00	90.09	110.77	30.30	37.26
1992	-	-	87.63	107.75	181.82	223.55	157.25	193.34	-	-
1993	-	-	-	-	-	-	81.90	100.70	22.11	27.19
1994	-	-	87.63	107.75	-	-	194.10	238.66	82.72	101.71
1995	-	-	54.05	66.46	134.32	165.15	199.84	245.71	108.93	133.93
1996	-	-	46.68	57.40	97.46	119.83	144.96	178.24	49.14	60.42
1997	-	-	82.71	101.71	95.83	117.82	153.15	188.31	115.48	141.99
1998	-	-	-	-	-	-	164.16	201.84	102.38	125.88
1999	-	-	-	-	-	-	104.83	128.90	-	-
2000	-	-	-	-	-	-	196.56	241.68	135.14	166.16
2001	-	-	-	-	-	-	175.27	215.49	196.09	241.10
Average	195.90	240.87	65.20	80.17	114.11	140.30	149.52	183.85	93.59	115.07

Appendix B6 Calculated groundwater recharge (R_c) in mm/y using $S_{y(WBA)}$ and $\Delta h_{hyp,hor}$ parameters (continued).

Year	G0147		AUG4		G0244		MW0187		MW0244	
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{min}
1967	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	17.14	25.87	-	-	-	-	-	-	-	-
1970	21.73	32.80	123.07	184.90	-	-	-	-	-	-
1971	29.78	44.97	136.53	205.12	-	-	-	-	-	-
1972	10.92	16.48	105.76	158.89	-	-	-	-	-	-
1973	12.14	18.33	121.15	182.01	-	-	-	-	-	-
1974	10.30	15.55	57.05	85.71	-	-	-	-	-	-
1975	7.45	11.24	126.92	190.67	-	-	-	-	-	-
1976	17.75	26.80	112.82	169.49	-	-	-	-	-	-
1977	9.38	14.17	107.69	161.78	-	-	-	-	-	-
1978	13.77	20.79	123.07	184.90	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-
1981	14.99	22.64	139.74	209.93	-	-	-	-	-	-
1982	-	-	66.02	99.18	-	-	-	-	-	-
1983	18.67	28.18	216.66	325.49	-	-	-	-	-	-
1984	10.91	16.48	205.76	309.12	-	-	-	-	-	-
1985	17.34	26.18	187.17	281.20	-	-	-	-	-	-
1986	13.36	20.18	158.32	237.84	-	-	-	-	-	-
1987	13.87	20.94	185.26	278.32	-	-	-	-	-	-
1988	15.61	23.56	125.00	187.79	-	-	-	-	-	-
1989	16.83	25.41	189.10	284.09	-	-	-	-	-	-
1990	19.99	30.18	251.91	378.46	-	-	-	-	-	-
1991	-	-	224.36	337.06	-	-	-	-	-	-
1992	23.05	34.80	230.76	346.68	-	-	448.71	674.12	-	-
1993	18.67	28.18	175.63	263.86	266.01	399.65	-	-	-	-
1994	18.97	28.64	265.37	398.68	433.96	651.95	-	-	-	-
1995	13.67	20.63	241.66	363.05	308.32	463.20	312.82	469.97	-	-
1996	13.36	20.17	196.15	294.68	326.27	490.17	424.98	638.47	208.33	312.98
1997	12.55	18.94	285.89	429.50	241.02	362.09	292.94	440.10	167.30	251.34
1998	-	-	-	-	279.47	419.87	270.06	405.73	177.56	266.75
1999	-	-	-	-	233.32	350.53	-	-	99.36	149.27
2000	7.34	11.09	-	-	332.04	498.83	862.15	1295.24	148.07	222.45
2001	15.81	23.87	-	-	339.11	509.45	849.97	1276.94	282.04	423.73
Average	15.38	23.22	167.65	251.86	306.61	460.64	494.52	742.94	180.44	271.09

Appendix B6 Calculated groundwater recharge (R_g) in mm/y using $S_{y(WBA)}$ and $\Delta h_{hyp,hor}$ parameters (continued).

Year	Q49		Q60		AUG2		G0781		G1020	
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{min}
1967	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-
1970	179.48	269.64	-	-	43.95	64.39	-	-	-	-
1971	94.87	142.52	-	-	27.69	40.57	-	-	-	-
1972	109.62	164.68	-	-	43.95	64.39	-	-	-	-
1973	199.35	299.49	-	-	36.72	53.80	-	-	-	-
1974	115.38	173.34	-	-	34.92	51.16	-	-	-	-
1975	167.94	252.31	-	-	68.22	99.94	-	-	-	-
1976	75.00	112.67	-	-	68.03	99.67	-	-	-	-
1977	107.69	161.79	-	-	56.18	82.31	-	-	-	-
1978	138.46	208.01	-	-	71.64	104.96	-	-	-	-
1979	141.02	211.86	-	-	77.06	112.90	-	-	-	-
1980	164.10	246.53	-	-	-	-	-	-	-	-
1981	121.15	182.01	-	-	133.64	195.80	-	-	-	-
1982	39.10	58.74	-	-	47.56	69.68	-	-	-	-
1983	103.20	155.04	-	-	47.56	69.68	-	-	-	-
1984	66.67	100.15	-	-	98.73	144.65	-	-	-	-
1985	91.66	137.71	-	-	54.78	80.26	-	-	-	-
1986	99.36	149.27	-	-	36.72	53.80	-	-	-	-
1987	88.46	132.89	-	-	59.60	87.32	-	-	-	-
1988	126.92	190.67	95.51	143.49	65.62	96.14	-	-	-	-
1989	93.59	140.60	82.05	123.26	73.44	107.60	-	-	-	-
1990	89.74	134.82	94.23	141.56	77.66	113.78	-	-	-	-
1991	100.00	150.23	52.56	78.97	95.72	140.24	68.03	99.67	0.98	37.32
1992	85.89	129.04	130.76	196.45	93.31	136.71	56.59	82.91	0.13	4.86
1993	23.71	35.63	58.33	87.63	64.41	94.37	47.56	69.68	0.74	27.93
1994	139.10	208.97	123.71	185.86	82.47	120.83	52.98	77.62	0.33	12.62
1995	200.63	301.42	108.33	162.75	80.06	117.30	48.16	70.56	0.39	14.90
1996	150.64	226.31	85.89	129.04	57.79	84.67	57.19	83.79	0.44	16.61
1997	96.15	144.45	80.76	121.33	62.61	91.73	40.94	59.98	0.24	9.16
1998	55.13	82.82	77.56	116.52	-	-	34.64	50.76	-	-
1999	-	-	51.28	77.04	-	-	-	-	0.03	1.14
2000	105.77	158.90	132.05	198.38	-	-	47.56	69.68	0.52	19.87
2001	119.87	180.08	92.95	139.64	-	-	58.39	85.55	1.18	44.80
Average	112.57	169.12	90.43	135.85	65.19	95.51	51.20	75.02	0.37	13.93

Appendix B7 Calculated groundwater recharge (R_y) in mm/y using $S_{y(PTA)}$ and $\Delta h_{hyp,rec}$ parameters.

Year	AUG1		AUG3		AUG5		G0135		G0486	
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}
1967	-	-	-	-	-	-	137.11	536.27	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	157.03	614.18	59.75	233.69	-	-	231.33	904.79	-	-
1970	146.31	572.24	98.05	383.49	75.07	293.61	209.12	817.91	-	-
1971	264.27	1033.62	42.90	167.78	60.51	236.68	216.01	844.87	-	-
1972	141.71	554.26	33.71	131.83	68.95	269.66	96.52	377.50	-	-
1973	171.58	671.10	47.49	185.75	49.02	191.74	158.56	620.17	-	-
1974	183.08	716.07	45.19	176.76	53.62	209.71	157.03	614.15	-	-
1975	340.87	1333.22	81.96	320.57	88.09	344.54	140.94	551.26	-	-
1976	186.14	728.03	63.58	248.67	119.50	467.38	131.75	515.31	-	-
1977	176.95	692.08	60.52	236.69	86.56	338.53	116.43	455.38	-	-
1978	-	-	90.39	353.53	103.41	404.46	-	-	-	-
1979	417.47	1632.82	66.64	260.65	183.07	716.04	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-
1981	245.12	958.72	72.77	284.62	116.43	455.38	173.12	677.10	-	-
1982	82.74	323.60	12.26	47.93	121.03	473.37	88.86	347.54	-	-
1983	433.79	1696.66	84.26	329.56	180.78	707.06	121.79	476.35	-	-
1984	181.53	710.02	85.03	332.56	85.79	335.55	88.09	344.54	-	-
1985	175.40	686.05	117.20	458.39	150.90	590.21	112.60	440.41	-	-
1986	210.65	823.90	45.19	176.77	104.94	410.43	153.20	599.20	-	-
1987	213.71	835.85	58.22	227.69	132.52	518.31	171.58	671.08	-	-
1988	253.55	991.68	44.43	173.77	158.56	620.17	138.65	542.28	-	-
1989	301.04	1177.43	62.81	245.68	150.90	590.21	147.07	575.23	-	-
1990	262.74	1027.63	101.88	398.47	122.56	479.36	119.49	467.37	-	-
1991	248.18	970.68	88.09	344.56	109.54	428.42	94.22	368.51	31.41	122.84
1992	-	-	84.26	329.56	166.22	650.13	150.90	590.21	-	-
1993	-	-	-	-	-	-	80.43	314.58	15.32	59.92
1994	-	-	86.56	338.55	-	-	210.65	823.90	86.56	338.55
1995	-	-	52.09	203.73	134.82	527.30	191.50	749.00	104.94	410.45
1996	-	-	55.15	215.71	101.88	398.47	148.60	581.22	60.51	236.68
1997	-	-	88.08	344.53	98.05	383.49	149.37	584.22	115.67	452.40
1998	-	-	-	-	-	-	93.45	365.52	104.17	407.44
1999	-	-	-	-	-	-	101.88	398.47	-	-
2000	-	-	-	-	-	-	189.20	740.01	134.82	527.30
2001	-	-	-	-	-	-	167.00	653.16	204.53	799.98
Average	228.28	892.85	67.72	264.87	112.91	441.61	144.72	566.05	95.33	372.84

Appendix B7 Calculated groundwater recharge (R_7) in mm/y using $S_{y(PTA)}$ and $\Delta h_{hyp,rec}$ parameters (continued).

Year	G0147		AUG4		G0244		MW0187		MW0244	
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}
1967	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	307.93	411.45	-	-	-	-	-	-	-	-
1970	356.96	476.95	170.13	793.76	-	-	-	-	-	-
1971	536.20	716.45	151.85	708.48	-	-	-	-	-	-
1972	274.23	366.41	155.36	724.87	-	-	-	-	-	-
1973	196.10	262.02	132.87	619.92	-	-	-	-	-	-
1974	226.74	302.96	63.28	295.22	-	-	-	-	-	-
1975	128.69	171.95	142.71	665.84	-	-	-	-	-	-
1976	294.14	393.02	144.12	672.40	-	-	-	-	-	-
1977	170.05	227.22	140.59	655.96	-	-	-	-	-	-
1978	229.80	307.05	144.82	675.68	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-
1981	255.84	341.85	160.99	751.12	-	-	-	-	-	-
1982	-	-	76.63	357.52	-	-	-	-	-	-
1983	309.46	413.49	243.24	1134.88	-	-	-	-	-	-
1984	185.37	247.69	241.84	1128.37	-	-	-	-	-	-
1985	288.02	384.84	210.90	984.00	-	-	-	-	-	-
1986	219.09	292.73	200.37	934.87	-	-	-	-	-	-
1987	229.79	307.03	206.67	964.28	-	-	-	-	-	-
1988	246.65	329.57	137.09	639.60	-	-	-	-	-	-
1989	268.10	358.23	281.20	1312.00	-	-	-	-	-	-
1990	318.66	425.78	287.53	1341.52	-	-	-	-	-	-
1991	-	-	248.86	1161.13	-	-	-	-	-	-
1992	343.17	458.53	268.55	1252.96	-	-	535.69	2499.36	-	-
1993	280.36	374.60	199.65	931.52	331.80	1548.12	-	-	-	-
1994	309.46	413.49	325.49	1518.64	533.58	2489.52	-	-	-	-
1995	220.61	294.78	284.01	1325.12	384.54	1794.16	409.15	1908.96	-	-
1996	217.54	290.67	238.32	1111.92	383.14	1787.60	534.28	2492.80	241.83	1128.32
1997	217.54	290.67	340.25	1587.52	338.13	1577.64	283.33	1321.95	185.59	865.92
1998	-	-	-	-	338.14	1577.67	319.17	1489.18	197.56	921.73
1999	-	-	-	-	248.86	1161.12	-	-	111.78	521.52
2000	122.56	163.76	-	-	430.24	2007.36	1017.24	4746.16	194.73	908.56
2001	283.41	378.67	-	-	419.70	1958.19	994.04	4637.92	357.12	1666.21
Average	260.61	348.22	199.90	932.66	378.68	1766.82	584.70	2728.05	214.77	1002.04

Appendix B7 Calculated groundwater recharge (R_r) in mm/y using $S_{y(PTA)}$ and $\Delta h_{hyp,rec}$ parameters (continued).

Year	Q49		Q60		AUG2		G0781		G1020
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	
1967	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-
1970	251.67	1174.24	-	-	72.15	216.15	-	-	-
1971	104.04	485.44	-	-	50.70	151.89	-	-	-
1972	125.14	583.86	-	-	106.28	318.39	-	-	-
1973	223.55	1043.04	-	-	67.28	201.55	-	-	-
1974	128.65	600.24	-	-	58.50	175.26	-	-	-
1975	190.51	888.88	-	-	138.46	414.81	-	-	-
1976	93.50	436.24	-	-	156.98	470.28	-	-	-
1977	119.51	557.57	-	-	104.33	312.54	-	-	-
1978	155.36	724.88	-	-	160.88	481.97	-	-	-
1979	164.50	767.52	-	-	155.03	464.44	-	-	-
1980	193.33	902.00	-	-	-	-	-	-	-
1981	135.68	633.04	-	-	250.58	750.70	-	-	-
1982	53.43	249.29	-	-	99.45	297.94	-	-	-
1983	117.40	547.76	-	-	87.74	262.85	-	-	-
1984	79.44	370.64	-	-	218.40	654.30	-	-	-
1985	100.53	469.04	-	-	106.28	318.39	-	-	-
1986	113.18	528.08	-	-	94.58	283.34	-	-	-
1987	104.04	485.44	-	-	96.53	289.18	-	-	-
1988	151.85	708.48	113.18	528.08	110.18	330.07	-	-	-
1989	108.26	505.12	97.01	452.64	138.45	414.78	-	-	-
1990	99.12	462.48	137.79	642.88	140.40	420.62	-	-	-
1991	111.78	521.52	63.27	295.20	185.25	554.99	138.45	414.78	3175.53
1992	97.72	455.92	156.77	731.44	158.93	476.12	98.48	295.02	621.72
1993	145.51	678.92	84.36	393.60	126.75	379.73	87.75	262.89	2275.01
1994	162.39	757.68	135.68	633.04	177.46	531.65	135.53	406.02	1034.34
1995	113.18	528.08	131.46	613.36	135.53	406.02	78.00	233.68	1795.47
1996	202.46	944.64	94.20	439.52	103.36	309.63	146.25	438.15	1628.19
1997	112.48	524.80	88.58	413.28	108.23	324.23	89.70	268.73	797.37
1998	68.19	318.16	93.50	436.24	-	-	65.33	195.71	-
1999	-	-	57.65	268.96	-	-	-	-	206.31
2000	140.60	656.00	155.36	724.88	-	-	87.75	262.89	1834.50
2001	131.46	613.36	101.94	475.60	-	-	109.20	327.14	4212.67
Average	132.21	616.85	107.91	503.48	126.25	378.22	103.64	310.50	1758.11

Appendix B8 Calculated groundwater recharge (R_g) in mm/y using $S_{y(PTA)}$ and $\Delta h_{hyp,hor}$ parameters.

Year	AUG1		AUG3		AUG5		G0135		G0486	
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}
1967	-	-	-	-	-	-	126.39	494.32	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	153.97	602.20	44.43	173.77	-	-	215.25	841.88	-	-
1970	133.28	521.30	95.75	374.50	69.71	272.64	206.05	805.92	-	-
1971	264.27	1033.62	32.94	128.84	50.56	197.74	284.19	1111.52	-	-
1972	133.29	521.32	28.35	110.87	62.82	245.72	91.15	356.53	-	-
1973	165.46	647.14	46.73	182.76	49.02	191.74	159.33	623.17	-	-
1974	170.83	668.13	42.13	164.78	46.07	180.20	147.07	575.24	-	-
1975	202.99	793.94	81.20	317.58	83.49	326.56	128.69	503.33	-	-
1976	160.86	629.16	55.92	218.71	100.35	392.48	118.73	464.38	-	-
1977	139.41	545.27	53.62	209.72	76.60	299.61	98.05	431.43	-	-
1978	-	-	75.07	293.61	98.05	383.49	-	-	-	-
1979	186.90	731.02	65.11	254.66	172.35	674.10	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-
1981	209.88	820.90	65.88	257.66	96.45	377.24	158.56	620.17	-	-
1982	65.12	254.69	11.49	44.94	114.13	446.40	78.90	308.59	-	-
1983	186.91	731.06	81.96	320.57	182.31	713.05	117.19	458.36	-	-
1984	166.23	650.17	79.66	311.58	72.78	284.63	74.30	290.61	-	-
1985	172.34	674.05	96.52	377.50	144.77	566.24	127.16	497.34	-	-
1986	173.12	677.10	40.96	160.20	95.75	374.50	83.49	326.55	-	-
1987	180.01	704.06	55.91	218.70	121.03	473.37	170.04	665.09	-	-
1988	229.80	898.80	44.43	173.77	140.94	551.26	126.39	494.34	-	-
1989	261.21	1021.64	61.28	239.67	128.69	503.33	133.28	521.30	-	-
1990	229.03	895.80	67.41	263.65	176.18	689.08	124.23	485.89	-	-
1991	225.99	883.90	84.27	329.58	109.54	428.42	84.26	329.56	28.34	110.85
1992	-	-	81.96	320.57	170.05	665.11	147.07	575.23	-	-
1993	-	-	-	-	-	-	76.60	299.60	20.69	80.90
1994	-	-	81.96	320.57	-	-	181.54	710.05	77.37	302.60
1995	-	-	50.56	197.74	125.62	491.34	186.90	731.02	101.88	398.47
1996	-	-	43.66	170.77	91.15	356.52	135.58	530.29	45.96	179.76
1997	-	-	77.36	302.59	89.63	350.54	143.24	560.25	108.01	422.44
1998	-	-	-	-	-	-	153.54	600.52	95.75	374.51
1999	-	-	-	-	-	-	98.05	383.49	-	-
2000	-	-	-	-	-	-	183.84	719.04	126.39	494.34
2001	-	-	-	-	-	-	163.92	641.13	183.40	717.31
Average	181.47	709.77	60.98	238.51	106.72	417.41	139.45	546.97	87.53	342.35

Appendix B8 Calculated groundwater recharge (R_g) in mm/y using $S_{y(PTA)}$ and $\Delta h_{hyp,hor}$ parameters (continued).

Year	G0147		AUG4		G0244		MW0187		MW0244	
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}
1967	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-
1969	257.38	343.90	-	-	-	-	-	-	-	-
1970	326.32	436.01	134.98	629.76	-	-	-	-	-	-
1971	447.34	597.72	149.74	698.64	-	-	-	-	-	-
1972	163.92	219.01	115.99	541.18	-	-	-	-	-	-
1973	182.31	243.59	132.87	619.92	-	-	-	-	-	-
1974	154.73	206.75	62.57	291.93	-	-	-	-	-	-
1975	111.84	149.43	139.19	649.44	-	-	-	-	-	-
1976	266.57	356.18	123.73	577.28	-	-	-	-	-	-
1977	140.95	188.33	118.10	551.02	-	-	-	-	-	-
1978	206.82	276.35	134.98	629.76	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-
1981	225.20	300.91	153.25	715.04	-	-	-	-	-	-
1982	-	-	72.40	337.81	-	-	-	-	-	-
1983	280.36	374.60	237.61	1108.64	-	-	-	-	-	-
1984	163.92	219.03	218.62	1020.03	-	-	-	-	-	-
1985	260.44	347.99	205.28	957.76	-	-	-	-	-	-
1986	200.69	268.16	173.63	810.10	-	-	-	-	-	-
1987	208.34	278.38	203.18	947.96	-	-	-	-	-	-
1988	234.40	313.19	137.09	639.60	-	-	-	-	-	-
1989	252.78	337.76	207.39	967.60	-	-	-	-	-	-
1990	300.27	401.21	276.28	1289.04	-	-	-	-	-	-
1991	-	-	246.06	1148.05	-	-	-	-	-	-
1992	346.23	462.62	253.08	1180.80	-	-	492.11	2296.06	-	-
1993	280.36	374.60	192.62	898.72	291.75	1361.21	-	-	-	-
1994	284.95	380.74	291.04	1357.92	475.93	2220.56	-	-	-	-
1995	205.29	274.29	265.03	1236.56	338.14	1577.68	343.08	1600.71	-	-
1996	200.69	268.16	215.12	1003.68	357.83	1669.52	466.09	2174.64	228.48	1066.00
1997	188.44	251.78	313.54	1462.88	264.33	1233.29	321.28	1499.00	183.48	856.08
1998	-	-	-	-	395.09	1843.36	296.18	1381.92	194.73	908.57
1999	-	-	-	-	255.89	1193.92	-	-	108.97	508.40
2000	110.30	147.38	-	-	364.15	1699.04	945.54	4411.60	162.39	757.68
2001	237.46	317.28	-	-	371.91	1735.22	932.18	4349.28	309.33	1443.24
Average	231.05	308.72	183.59	856.58	346.11	1614.87	542.35	2530.46	197.90	923.33

Appendix B8 Calculated groundwater recharge (R_g) in mm/y using $S_{y(PTA)}$ and $\Delta h_{hyp,hor}$ parameters (continued).

Year	Q49		Q60		AUG2		G0781		G1020 R
	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	R_{min}	R_{max}	
1967	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-
1970	196.84	918.40	-	-	71.18	213.23	-	-	-
1971	104.04	485.44	-	-	44.85	134.37	-	-	-
1972	120.22	560.91	-	-	71.18	213.23	-	-	-
1973	218.63	1020.08	-	-	59.48	178.18	-	-	-
1974	126.54	590.40	-	-	56.55	169.42	-	-	-
1975	184.19	859.36	-	-	110.48	330.98	-	-	-
1976	82.25	383.76	-	-	110.18	330.07	-	-	-
1977	118.11	551.05	-	-	90.99	272.60	-	-	-
1978	151.85	708.48	-	-	116.03	347.60	-	-	-
1979	154.66	721.60	-	-	124.80	373.89	-	-	-
1980	179.97	839.68	-	-	-	-	-	-	-
1981	132.87	619.92	-	-	216.45	648.46	-	-	-
1982	42.88	200.08	-	-	77.03	230.76	-	-	-
1983	113.18	528.08	-	-	77.03	230.78	-	-	-
1984	73.11	341.13	-	-	159.90	479.04	-	-	-
1985	100.53	469.04	-	-	88.73	265.81	-	-	-
1986	108.97	508.40	-	-	59.48	178.18	-	-	-
1987	97.01	452.64	-	-	96.53	289.18	-	-	-
1988	139.19	649.44	104.75	488.72	106.28	318.39	-	-	-
1989	102.64	478.88	89.98	419.84	118.95	356.36	-	-	-
1990	98.42	459.20	103.34	482.16	125.78	376.81	-	-	-
1991	109.67	511.68	57.65	268.96	155.03	464.44	110.18	330.07	2737.82
1992	94.20	439.52	143.41	669.12	151.13	452.76	91.65	274.57	356.86
1993	26.01	121.35	63.97	298.48	104.33	312.55	77.03	230.76	2049.18
1994	152.55	711.76	135.68	633.04	133.58	400.17	85.80	257.05	925.58
1995	220.04	1026.64	118.81	554.32	129.67	388.48	78.00	233.68	1092.90
1996	165.21	770.80	94.20	439.52	93.60	280.42	92.63	277.50	1218.36
1997	105.45	492.00	88.58	413.26	101.40	303.78	66.30	198.63	671.91
1998	60.46	282.08	85.06	396.88	-	-	56.12	168.11	-
1999	-	-	56.24	262.40	-	-	-	-	83.64
2000	116.00	541.20	144.82	675.68	-	-	77.03	230.76	1458.12
2001	131.46	613.36	101.94	475.60	-	-	94.57	283.32	3287.05
Average	123.46	576.01	99.17	462.71	105.58	316.29	82.93	248.45	1388.14

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