

Local Area Risk Assessment Report

Appendices

APPENDIX A

Conceptual and Numerical Model Development Report

APPENDIX B

HRU-based Distribution of Average Monthly Recharge Rates for Transient Drought Scenarios

HRU-based Distribution of Average Monthly Recharge Rates for Transient Drought Scenarios

Year	Month	Recharge (mm/month)						
		Waterbody / Impervious Area	Wetland	Fine Grain Soil / Granite Bedrock	Developed Area	Medium/Coarse Grain Soil - not on HPGRA	Medium/Coarse Grain Soil - on HPGRA	HPGRA Receiving Overland Flow
1953	1	0.0	2.9	3.6	11.5	29.2	30.2	145.5
1953	2	0.0	2.1	0.0	8.5	14.5	16.7	82.8
1953	3	0.0	2.4	3.4	9.3	16.0	15.9	132.6
1953	4	0.0	3.4	10.2	13.6	59.7	59.1	198.3
1953	5	0.0	3.7	4.3	14.2	60.8	74.1	187.0
1953	6	0.0	3.6	6.5	14.4	52.2	64.2	193.9
1953	7	0.0	3.8	4.7	14.8	41.4	50.1	195.1
1953	8	0.0	4.4	6.2	17.3	49.5	53.1	197.7
1953	9	0.0	4.9	10.5	18.1	40.8	45.3	193.6
1953	10	0.0	4.5	2.9	16.2	33.6	39.2	150.9
1953	11	0.0	3.7	2.5	6.2	11.9	16.3	127.1
1953	12	0.0	3.6	9.3	12.8	22.8	25.0	186.3
1954	1	0.0	2.9	3.3	11.4	15.7	18.5	123.4
1954	2	0.0	2.1	0.7	7.5	10.2	11.2	93.1
1954	3	0.0	2.4	6.4	9.6	17.6	17.1	165.6
1954	4	0.0	3.4	10.2	13.6	49.8	47.2	194.3
1954	5	0.0	3.7	6.4	14.8	66.7	75.0	193.5
1954	6	0.0	3.6	8.9	14.4	62.4	74.2	197.4
1954	7	0.0	2.4	0.1	8.4	35.9	44.0	135.3
1954	8	0.0	2.3	2.9	0.0	15.2	20.0	126.3
1954	9	0.0	4.8	11.8	0.2	17.8	21.3	183.2
1954	10	0.0	4.5	8.9	15.2	68.8	65.8	203.9
1954	11	0.0	3.7	9.4	14.8	54.2	61.7	194.9
1954	12	0.0	3.7	5.0	14.9	38.5	42.5	162.8
1955	1	0.0	2.9	0.0	11.3	19.6	22.9	105.2
1955	2	0.0	2.1	0.7	7.2	10.1	12.9	79.3
1955	3	0.0	2.4	3.0	7.2	7.2	10.0	98.8
1955	4	0.0	3.4	9.4	13.3	53.1	52.3	198.2
1955	5	0.0	3.6	0.6	11.8	43.0	63.0	158.1
1955	6	0.0	2.7	2.8	4.1	21.3	33.1	153.3
1955	7	0.0	1.3	2.0	0.0	9.7	15.6	106.2
1955	8	0.0	2.1	3.7	0.0	4.5	7.4	105.1
1955	9	0.0	3.9	5.0	0.0	2.3	3.7	110.3
1955	10	0.0	4.5	12.4	0.9	17.4	19.6	203.5
1955	11	0.0	3.7	11.0	11.6	37.0	30.6	196.6
1955	12	0.0	3.7	4.7	14.9	32.5	30.0	150.9
1956	1	0.0	2.9	0.0	11.3	15.1	15.8	90.6
1956	2	0.0	2.2	0.0	7.3	7.8	9.1	50.7
1956	3	0.0	2.4	0.0	6.6	4.5	6.4	29.0
1956	4	0.0	3.4	9.0	12.6	45.0	41.7	182.4
1956	5	0.0	3.7	11.2	14.9	72.9	72.8	204.9
1956	6	0.0	3.6	3.5	11.9	53.1	68.6	170.9
1956	7	0.0	3.8	6.0	6.6	26.1	42.7	186.3
1956	8	0.0	4.0	5.9	2.6	16.4	25.7	176.4
1956	9	0.0	4.9	12.4	14.4	46.0	48.3	197.7
1956	10	0.0	4.5	3.9	17.3	39.1	44.2	175.2
1956	11	0.0	3.7	7.7	14.1	36.5	36.2	185.5
1956	12	0.0	3.7	4.3	14.9	32.4	35.0	149.3
1957	1	0.0	2.9	1.3	11.3	15.3	19.1	108.8
1957	2	0.0	2.1	2.8	7.5	8.5	11.5	99.4
1957	3	0.0	2.4	4.9	8.2	16.3	16.5	146.0
1957	4	0.0	3.4	10.1	13.6	60.3	62.3	198.3
1957	5	0.0	3.7	7.2	14.9	74.9	79.3	201.9
1957	6	0.0	3.6	5.8	14.3	56.5	74.0	187.2
1957	7	0.0	3.6	3.7	12.7	62.2	70.5	180.8
1957	8	0.0	2.2	2.4	0.4	23.8	28.7	161.5
1957	9	0.0	4.9	10.6	1.2	29.4	38.8	197.5
1957	10	0.0	4.5	6.5	2.9	22.5	29.1	174.1
1957	11	0.0	3.7	8.7	10.8	42.6	39.4	186.8
1957	12	0.0	3.7	7.2	14.9	44.3	42.5	184.4
1958	1	0.0	2.9	3.4	11.5	25.1	27.3	139.4
1958	2	0.0	2.1	0.0	8.5	12.3	15.1	74.8

HRU-based Distribution of Average Monthly Recharge Rates for Transient Drought Scenarios

Year	Month	Recharge (mm/month)						
		Waterbody / Impervious Area	Wetland	Fine Grain Soil / Granite Bedrock	Developed Area	Medium/Coarse Grain Soil - not on HPGRA	Medium/Coarse Grain Soil - on HPGRA	HPGRA Receiving Overland Flow
1958	3	0.0	2.4	3.3	9.2	10.4	12.4	117.9
1958	4	0.0	3.4	7.5	13.6	53.6	55.2	192.3
1958	5	0.0	3.7	7.7	14.9	52.2	57.6	193.1
1958	6	0.0	3.6	4.3	14.2	30.8	35.6	162.6
1958	7	0.0	3.8	4.4	14.8	29.0	31.1	162.6
1958	8	0.0	2.5	1.9	3.8	11.4	13.1	99.9
1958	9	0.0	4.9	8.8	13.5	20.2	25.9	193.0
1958	10	0.0	4.5	10.0	17.9	37.4	35.2	191.7
1958	11	0.0	3.7	7.1	14.8	39.3	34.9	181.6
1958	12	0.0	3.7	4.4	14.9	31.1	31.6	148.3
1959	1	0.0	2.9	0.0	11.2	14.4	17.1	89.3
1959	2	0.0	2.1	0.0	7.0	7.1	9.5	47.4
1959	3	0.0	2.4	1.7	6.6	4.8	7.1	57.3
1959	4	0.0	3.4	10.2	12.6	36.0	34.6	191.9
1959	5	0.0	3.7	5.9	14.9	63.3	72.6	194.4
1959	6	0.0	2.8	1.7	8.0	29.4	44.8	150.8
1959	7	0.0	3.6	4.2	12.5	32.7	42.6	155.8
1959	8	0.0	3.2	4.0	3.1	16.8	23.5	163.3
1959	9	0.0	4.9	9.8	18.6	52.3	55.5	198.0
1959	10	0.0	4.5	9.9	17.9	82.6	85.3	204.5
1959	11	0.0	3.7	10.8	14.8	67.3	80.1	197.8
1959	12	0.0	3.7	2.0	14.9	40.2	55.7	157.5
1960	1	0.0	2.9	3.6	11.2	23.1	31.9	142.5
1960	2	0.0	2.2	0.0	7.1	11.9	18.4	78.2
1960	3	0.0	2.4	0.4	6.4	7.0	12.7	51.5
1960	4	0.0	3.4	10.2	12.5	37.9	39.1	195.0
1960	5	0.0	3.7	5.4	14.6	63.7	74.0	188.6
1960	6	0.0	3.6	6.0	12.5	38.9	56.9	185.5
1960	7	0.0	3.8	4.3	9.5	24.3	36.5	184.3
1960	8	0.0	3.1	1.5	4.7	14.4	22.6	105.7
1960	9	0.0	4.9	6.3	8.2	20.8	30.1	197.6
1960	10	0.0	4.5	6.2	13.3	20.5	25.6	173.0
1960	11	0.0	3.7	8.2	14.1	41.4	36.2	193.1
1960	12	0.0	3.7	5.4	14.9	42.3	40.3	168.3
1961	1	0.0	2.9	0.0	11.5	19.0	21.5	101.9
1961	2	0.0	2.1	0.0	7.7	9.5	12.0	60.5
1961	3	0.0	2.4	2.4	7.6	9.6	10.5	92.0
1961	4	0.0	3.4	10.2	13.6	55.2	50.6	198.3
1961	5	0.0	3.7	6.3	14.9	52.8	52.6	186.0
1961	6	0.0	2.9	2.4	10.3	29.6	30.9	131.3
1961	7	0.0	3.3	1.9	10.9	35.8	37.2	145.2
1961	8	0.0	1.1	1.1	0.3	11.7	12.9	80.2
1961	9	0.0	4.1	7.0	0.0	7.2	11.8	176.9
1961	10	0.0	4.5	7.5	0.0	12.5	13.1	162.9
1961	11	0.0	3.7	11.1	8.9	36.3	28.1	198.2
1961	12	0.0	3.7	8.2	14.9	35.3	31.0	178.4
1962	1	0.0	2.9	0.0	11.2	16.9	17.3	95.6
1962	2	0.0	2.1	0.0	6.9	8.4	9.7	53.3
1962	3	0.0	2.4	3.8	6.8	8.3	8.5	107.3
1962	4	0.0	3.4	10.2	13.6	52.6	50.1	198.3
1962	5	0.0	3.7	7.7	14.9	70.4	76.1	204.4
1962	6	0.0	3.0	0.4	10.0	37.8	55.4	143.6
1962	7	0.0	1.0	0.9	0.1	16.1	21.3	102.8
1962	8	0.0	2.8	4.9	0.0	7.6	12.2	141.5
1962	9	0.0	4.9	9.8	0.0	10.4	14.9	188.3
1962	10	0.0	4.5	5.5	0.1	18.2	17.3	161.8
1962	11	0.0	3.7	11.1	8.6	27.6	22.8	192.9
1962	12	0.0	3.7	3.6	10.9	20.0	19.0	132.9
1963	1	0.0	2.9	0.0	6.2	9.2	10.2	59.9
1963	2	0.0	2.1	0.0	3.6	4.6	5.7	30.2
1963	3	0.0	2.4	1.8	3.7	5.9	5.6	68.6
1963	4	0.0	3.4	9.3	13.3	53.3	52.1	196.7

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Year	Month	Recharge (mm/month)						
		Waterbody / Impervious Area	Wetland	Fine Grain Soil / Granite Bedrock	Developed Area	Medium/Coarse Grain Soil - not on HPGRA	Medium/Coarse Grain Soil - on HPGRA	HPGRA Receiving Overland Flow
1963	5	0.0	3.7	6.5	14.9	58.1	65.3	194.7
1963	6	0.0	3.6	2.6	12.8	37.8	42.4	162.0
1963	7	0.0	1.6	2.7	1.1	17.0	15.9	121.5
1963	8	0.0	3.6	5.2	0.0	8.4	10.7	153.5
1963	9	0.0	4.9	2.9	0.0	6.9	9.2	138.0
1963	10	0.0	1.9	0.0	0.0	4.2	2.4	40.1
1963	11	0.0	3.0	6.2	0.0	4.5	4.9	152.0
1963	12	0.0	3.7	9.1	0.0	15.0	17.2	170.4
1964	1	0.0	2.9	0.1	0.0	8.6	8.2	60.2
1964	2	0.0	2.2	0.0	0.0	4.8	4.4	30.2
1964	3	0.0	2.4	5.3	0.0	5.1	4.5	111.4
1964	4	0.0	3.4	9.3	5.1	33.7	31.7	167.5
1964	5	0.0	3.7	5.4	14.9	62.9	72.0	195.5
1964	6	0.0	3.6	1.7	13.0	35.2	53.1	159.6
1964	7	0.0	2.8	0.8	3.0	18.5	26.2	129.9
1964	8	0.0	4.4	8.9	0.0	8.9	14.3	185.9
1964	9	0.0	4.9	8.4	1.7	8.3	17.1	181.2
1964	10	0.0	4.5	9.9	16.8	52.4	49.6	200.1
1964	11	0.0	3.7	6.4	14.7	37.0	37.5	175.7
1964	12	0.0	3.7	7.5	14.9	31.1	32.9	170.7