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State Water Survey Division

WATER QUALITY SECTION

AT

PEORIA, ILLINOIS

ENR

Illinois Department of
Energy and Natural Resources

SWS Contract Report 322A

**APPENDICES FOR
AN INVENTORY OF COURT CREEK WATERSHED CHARACTERISTICS
THAT MAY RELATE TO WATER QUALITY IN THE WATERSHED**

by

*Donald Roseboom, Ralph L. Evans,
John Erickson, and Lyle G. Brooks*

Prepared for the
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Appendix A

Court Creek Watershed
Illinois Annual Farm Census - Township Assessor

Appendix A

From Illinois Agricultural Statistics: Assessor's Annual
Farm Census (1962-1978). Illinois Cooperative Crop
Reporting Service.

Court Creek Watershed Illinois Annual Farm Census - Township Assessor

Year	Farms No.	Farm Acre	Corn	Soybean	All Hay Acres	Total Crops Harvested	Pasture
1977							
Copley	38	17,478	7,478	1,501	767	10,502	-
Knox	88	17,906	7,940	1,760	961	11,057	-
Persifer	61	16,160	5,663	1,293	896	8,543	-
Sparta	52	20,032	10,500	4,743	773	16,415	-
Total	239	71,576	31,581	9,297	3397	46,517	-
1976							
Copley	39	16,286	7,539	1,246	677	9,904	5,487
Knox	97	16,881	7,460	1,436	873	10,312	4,744
Persifer	61	16,999	6,441	805	1100	9,190	6,845
Sparta	68	21,331	11,792	4,423	564	17,453	3,002
Totals	265	71,497	33,232	7,910	3214	46,859	20,078
1975							
Copley	39	16,575	7,105	1,700	640	10,000	5,951
Knox	95	16,848	6,698	2,046	831	10,352	4,730
Persifer	69	16,571	5,409	1,660	1059	8,875	6,849
Sparta	69	23,227	11,765	5,375	726	18,692	3,547
Totals	272	73,221	30,977	10,781	3256	47,939	21,077
1974							
Copley	42	17,256	6,601	2,290	573	9,985	6,456
Knox	97	16,536	5,959	2,521	885	9,948	4,386
Persifer	69	17,808	5,906	1,930	1088	9,613	7,062
Sparta	73	22,775	10,782	5,673	868	18,086	3,375
Totals	281	75,375	29,248	12,414	3414	47,632	21,279
1973							
Copley	45	17,183	6,591	2,810	748	10,519	5,594
Knox	98	17,085	5,603	2,704	1188	10,166	5,090
Persifer	68	16,475	5,174	1,481	1136	8,216	7,669
Sparta	68	22,927	9,763	5,817	906	17,087	3,756
Totals	279	73,940	27,131	12,812	3978	45,988	22,109
1972							
Copley	43	17,709	6,215	2,451	955*	10,023	5,387
Knox	103	16,545	4,940	1,800	1202*	8,490	5,659
Persifer	75	18,606	5,474	1,699	1062*	8,962	7,587
Sparta	68	20,843	8,262	4,037	764*	13,682	4,211
Totals	289	73,703	24,891	9,987	3983	41,157	22,844

* calculated

Court Creek Watershed (Cont'd).
 Illinois Annual Farm Census - Township Assessor

Year	Farms No.	Farm Acre	Corn	Soybean	Hay	Total Crops Harvested Acres	Pasture
1971							
Copley	46	16,925	6,248	2,069	828	9,703	4,969
Knox	112	16,041	5,158	1,612	701	8,251	5,647
Persifer	75	18,720	5,714	1,453	1134	8,975	7,809
Sparta	61	19,910	8,459	3,774	578	13,569	4,854
Totals	294	71,596	25,579	8,908	3241	40,498	23,279
1970							
Copley	52	15,909	6,102	1,814	885	9,846	4,364
Knox	111	17,632	5,812	1,575	1142	9,168	6,150
Persifer	77	20,802	6,420	1,346	1311	9,972	8,229
Sparta	71	22,125	8,712	3,512	557	13,854	2,458
Totals	311	76,468	27,046	8,247	3895	42,840	21,201
1969							
Copley	57	17,679	6,638	1,630	1131	10,532	5,122
Knox	111	18,679	6,207	1,505	1223	9,870	5,943
Persifer	70	19,977	6,866	1,160	1547	10,674	7,284
Sparta	62	19,503	10,165	3,476	841	15,395	1,851
Totals	300	75,838	29,876	7,771	4742	46,471	20,200
1968							
Copley	61	18,158	7,060	1,411	1075	10,528	5,578
Knox	135	18,724	6,646	1,684	1172	10,477	6,435
Persifer	80	21,171	6,957	778	1524	10,404	9,199
Sparta	61	19,474	9,404	3,430	565	14,795	2,289
Totals	337	77,527	30,067	7,303	4336	46,204	23,501
1967							
Copley	59	17,973	7,164	1,115	1116	10,567	5,001
Knox	126	18,537	6,518	1,124	1376	10,144	6,392
Persifer	102	23,210	8,140	762	1534	11,616	10,869
Sparta	72	22,778	12,291	2,840	1087	18,203	3,138
Totals	359	82,498	34,113	5,841	5113	50,530	25,400
1966							
Copley	57	17,556	6,616	1,058	1232	10,149	5,773
Knox	110	19,582	6,809	1,287	1329	10,413	6,836
Persifer	87	22,506	7,134	809	764	10,432	11,181
Sparta	79	23,406	12,293	2,508	1405	17,660	3,793
Totals	333	83,050	32,852	5,662	4730	48,654	27,583

Court Creek Watershed (Conc'd.)
 Illinois Annual Farm Census - Township Assessor

Year	Farm No.	Farm Acre	Corn	Soybean	Hay	Total Crops Harvested Acres	Pasture
1965							
Copley	63	17,634	5,857	1,242	1561	10,051	6,268
Knox	111	19,903	6,709	1,342	1436	10,599	7,090
Persifer	73	18,858	5,656	762	1492	8,692	8,046
Sparta	76	22,088	11,094	2,534	1600	16,624	4,171
Total	323	78,806	29,316	5,880	6089	45,966	25,575
1964							
Copley	64	17,582	5,521	1,260	1599		5,414
Knox	118	20,011	6,258	1,039	1655		7,330
Persifer	102	22,631	6,063	876	1719		5,685
Sparta	69	19,722	9,136	2,449	1635		3,369
Totals	352	79,946	26,978	5,624	6608		21,798
1963							
Copley	67	18,494	5,460	1,682	1686		5,537
Knox	122	20,454	6,250	1,291	1667		7,497
Persifer	105	21,890	6,040	695	1819		7,643
Sparta	86	21,329	8,393	2,576	2287		4,554
Totals	380	82,167	26,143	6,244	7459		25,231
1962							
Copley	69	18,223	5,105	1,716	1821		5,196
Knox	126	20,063	5,713	1,311	1877		7,254
Persifer	105	21,847	5,535	989	1747		7,616
Sparta	85	21,591	8,452	2,458	1978		4,538
Totals	385	81,724	24,825	6,474	7423		24,604
1961							
Copley	65	19,113	5,576	1,654	1606		5,865
Knox	138	20,579	5,516	1,395	1556		7,267
Persifer	106	22,014	5,252	1,022	1574		9,649
Sparta	87	21,071	7,870	2,798	1878		4,580
Totals	396	82,777	24,214	6,869	6614		27,361

Appendix B

Land Use Area (Acres) in Court Creek Watershed
above Stream Sampling Stations, 1969, 1963, 1950, and 1940

Appendix B

Land Use Area in Court Creek Watershed, 1969
(Acres)

Drainage Basin	RC	WPAS	PAS	WDS	WTR	CFL	URB	NP	AM	IMR	IMP	Total Acres
S5	2127	41	456	385	148	0	0	115	0	0	1688	4960
S3	4169	1160	1508	1026	326	4	0	309	243	32	2573	11350
S2	5237	1916	2317	1176	328	4	0	404	243	32	2573	14230
S1	5407	1982	2372	1204	328	4	0	410	243	32	2573	14555
N4	7087	1497	3674	892	33	24	278	347	0	0	108	13940
N3	8138	2096	4150	1233	36	24	278	433	0	0	108	16496
N2	8558	2371	4419	1288	36	24	278	474	0	0	108	17556
N1	8875	2415	4735	1343	36	35	278	501	0	0	108	18326
M3	2850	469	544	132	0	43	0	103	0	0	0	4141
M1	3664	961	1039	293	3	48	0	158	0	0	0	6166
6 Confluence	3747	998	1122	364	3	48	0	174	0	0	0	6456
C12	1307	109	249	8	99	4	1209	170	0	0	0	3155
C10	5060	1225	1520	266	135	17	1495	317	0	0	0	10035
C7	10707	2636	3763	656	143	83	1495	628	0	0	0	20111
C4	21853	5291	9352	2091	179	130	1773	1280	0	0	108	42057
C3	23544	5829	10009	2271	179	130	1773	1414	0	0	108	45257
C2	29455	7951	12543	3707	507	134	1795	1884	243	32	2681	60932
Confluence	29582	8060	12582	3768	507	134	1860	1893	243	32	2681	61252

S = Sugar Creek Watershed
 N = North Creek Watershed
 M = Middle Creek Watershed
 C = Court Creek Watershed

RC: Row crops
 WPAS: Wood pasture
 PAS: Pasture
 WDS: Woods
 WTR: Water
 CFL: Confined feed lots
 URB: Urban

NP: Non-productive
 AM: Active mineral
 IMR: Inactive, recreation mineral
 IMP: Inactive, pasture mineral

Appendix B

Land Use Area in Court Creek Watershed, 1963
(Acres)

	Drainage Basin	RC	WPAS	PAS	WDS	WTR	CFL	URB	NP	AM	IMR	IMP	Total Acres
10	S5	1945	163	258	615	100	0	0	63	1673	0	23	4840
	S3	4012	1315	1118	1577	212	0	0	144	2823	16	23	11240
	S2	5349	1718	1755	2016	221	0	0	199	2823	16	23	14120
	S1	5522	1797	1790	2045	221	0	0	203	2823	16	23	14440
	N4	7101	1880	3097	1312	19	0	242	229	38	0	0	13918
	N3	8158	2312	3620	1833	24	0	242	256	38	0	0	16483
	N2	8581	2416	3891	2086	25	0	242	264	38	0	0	17543
	N1	9025	2426	4070	2220	25	0	242	267	38	0	0	18313
	M3	2874	445	549	131	0	33	0	113	0	0	0	4145
	M1	3684	971	969	379	2	33	0	132	0	0	0	6170
	Confluence	3801	992	1018	480	2	33	0	134	0	0	0	6460
	C12	1907	0	488	51	60	20	715	72	0	0	0	3155
	C10	5406	575	2342	525	78	20	978	165	104	0	0	10035
	C7	11140	1681	4578	1232	82	53	978	558	104	0	0	20115
	C4	22483	4169	9595	3673	114	57	1220	876	142	0	0	42329
	C3	24308	4815	9998	3928	114	57	1238	929	142	0	0	45529
	C2	30359	6722	11910	6248	350	57	1238	1201	2965	16	23	61089
	Confluence	30482	6767	11978	6297	350	57	1260	1214	2965	16	23	61409

Appendix B

Land Use Area in Court Creek Watershed, 19 50
(Acres)

Drainage Basin	RC	WPAS	PAS	WDS	WTR	CFL	URB	NP	AM	IMR	IMP	Total Acres
S5	2260	2571	247	517	26	0	0	47	1145	0	0	4960
S3	4897	718	1165	1102	49	0	0	154	1324	0	0	11362
S2	5976	3714	1485	1398	50	0	0	195	1324	0	0	14242
S1	6122	3870	1485	1412	50	0	0	199	1324	0	0	14562
N4	7168	3161	2648	411	3	0	358	211	0	0	0	13960
N3	8249	4243	2836	578	3	0	358	250	0	0	0	16517
N2	8706	4667	3005	578	3	0	358	260	0	0	0	17577
N1	9058	4935	3089	638	3	0	358	266	0	0	0	18347
M3	2877	477	665	32	0	0	0	94	0	0	0	4145
M1	3521	1184	1287	54	0	0	0	124	0	0	0	6170
Confluence	3573	1287	1354	122	0	0	0	124	0	0	0	6460
C12	1817	23	406	6	55	0	756	92	0	0	0	3155
C10	5274	949	2238	123	68	0	992	287	102	0	0	10033
C7	10787	2447	4877	323	70	0	992	515	102	0	0	20113
C4	22120	8209	8375	1008	75	0	1350	841	102	0	0	42080
C3	23952	9001	8742	1148	75	0	1372	888	102	0	0	45280
C2	30634	13148	10272	2745	125	0	1410	1102	1426	0	0	60962
Confluence	30794	13228	10297	2756	125	0	1452	1104	1426	0	0	61282

Appendix B

Land Use Area in Court Creek Watershed, 1940
(Acres)

Drainage Basin	RC	WPAS	PAS	WDS	WTR	CFL	URB	NP	AM	IMR	IMP	Total Acres
S5	2415	900	591	966	0	0	0	78	0	0	0	4950
S3	5050	1938	2340	1574	8	0	0	176	264	0	0	11350
S2	6124	2230	3344	2045	8	0	0	215	264	0	0	14230
S0	6268	2339	3374	2077	8	0	0	220	264	0	0	14550
N4	7081	1410	3706	1204	1	0	334	204	0	0	0	13940
N3	7944	2152	4350	1479	1	0	334	245	0	0	0	16505
N2	8353	2457	4594	1565	1	0	334	261	0	0	0	17565
N1	8716	2488	4870	1655	1	0	334	271	0	0	0	18335
M3	2810	55	1076	110	0	0	0	98	0	0	0	4149
M1	3461	805	1540	230	0	0	0	138	0	0	0	6174
Confluence	3524	823	1604	374	0	0	0	139	0	0	0	6464
C12	1760	115	443	16	55	0	722	64	0	0	0	3175
C10	5053	279	2846	339	69	0	1118	234	117	0	0	10055
C7	10460	1304	5802	818	69	0	1118	427	141	0	0	20139
C4	21337	4041	11663	2608	70	5	1452	782	141	0	0	42094
C3	23160	4297	12620	2715	70	5	1470	816	141	0	0	45294
C2	29928	6751	16169	5079	80	5	1470	1067	405	0	0	60954
Confluence	30053	6791	16211	5139	80	5	1520	1072	405	0	0	61274

Appendix C

Land Uses (Percent of Total) in Court Creek Watershed
above Stream Sampling Stations, 1969, 1963, 1950, and 1940

Appendix C

Land Uses (Percent of Total) in the Court Creek Watershed Above Stream
Sampling Stations, 1969

Drainage Basin	RC	WPAS	PAS	WDS	WTR	CFL	URB	NP	AM	IMR	IMP
S5	42.88	0.83	9.19	7.76	2.98	0.00	0.0	2.32	0.00	0.00	34.0
S3	36.73	10.22	13.29	9.04	2.87	0.04	0.0	2.72	2.14	2.81	22.7
S2	36.80	13.46	16.28	8.26	2.30	0.03	0.0	2.84	1.71	0.22	18.1
Confluence	37.15	13.62	16.30	8.27	2.25	0.03	0.0	2.82	1.67	0.22	17.7
N4	50.84	10.74	26.36	6.40	0.24	0.17	2.0	2.49	0.00	0.00	0.8
N3	49.33	12.71	25.16	7.47	0.22	0.15	1.7	2.62	0.00	0.00	0.7
N2	48.75	13.51	25.17	7.34	0.21	0.14	1.6	2.70	0.00	0.00	0.6
N1	48.43	13.18	25.84	7.33	0.20	0.19	1.5	2.73	0.00	0.00	0.6
M3	68.82	11.33	13.14	3.19	0.00	1.04	0.0	2.49	0.00	0.00	0.0
M1	59.42	15.59	16.85	4.75	0.05	0.78	0.0	2.56	0.00	0.00	0.0
Confluence	58.04	15.46	17.38	5.64	0.05	0.74	0.0	2.70	0.00	0.00	0.0
C12	41.43	3.45	7.89	0.25	3.14	0.13	38.3	5.39	0.00	0.00	0.0
C10	50.42	12.21	15.15	2.65	1.35	0.17	14.9	3.16	0.00	0.00	0.0
C7	53.24	13.11	18.71	3.26	0.71	0.41	7.4	3.12	0.00	0.00	0.0
C4	51.96	12.58	22.24	4.97	0.43	0.31	4.2	3.04	0.00	0.00	0.3
C3	52.02	12.88	22.16	5.02	0.40	0.29	3.9	3.12	0.00	0.00	0.2
C2	48.34	13.05	20.59	6.08	0.83	0.22	3.0	3.09	0.40	0.05	4.4
Confluence	48.30	13.16	20.54	6.15	0.83	0.22	3.0	3.09	0.40	0.05	4.4

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S = Sugar Creek Watershed
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WDS: Wood⁵
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CFL: Confined feed lots
URB: Urban

NP: Non-productive
AM: Active mineral
IMR: Inactive, recreation
mineral
IMP: Inactive, pasture
mineral

Appendix C

Land Uses (Percent of Total) in the Court Creek Watershed Above Stream
Sampling Stations, 1963

Drainage Basin	RC	WPAS	PAS	WDS	WTR	CFL	URB	NP	AM	IMR	IMP
S5	40.19	3.37	5.33	12.7	2.07	0.00	0.0	1.30	34.6	0.00	0.48
S3	35.69	11.70	9.95	14.0	1.89	0.00	0.0	1.28	25.1	0.14	0.20
S2	37.88	12.17	12.43	14.3	1.57	0.00	0.0	1.41	20.0	0.11	0.16
Confluence	38.24	12.44	12.40	14.2	1.53	0.00	0.0	1.41	19.6	0.11	0.16
N4	51.02	13.51	22.25	9.4	0.14	0.00	1.7	1.65	0.3	0.00	0.00
N3	49.49	14.03	21.96	11.1	0.15	0.00	1.5	1.55	0.2	0.00	0.00
N2	48.91	13.77	22.18	11.9	0.14	0.00	1.4	1.50	0.2	0.00	0.00
N1	49.28	13.25	22.22	12.1	0.14	0.00	1.3	1.46	0.2	0.00	0.00
M3	69.34	10.74	13.24	3.2	0.00	0.80	0.0	2.73	0.0	0.00	0.00
M1	59.71	15.74	15.71	6.1	0.03	0.53	0.0	2.14	0.0	0.00	0.00
Confluence	58.84	15.36	15.76	7.4	0.03	0.51	0.0	2.07	0.0	0.00	0.00
C12	60.44	0.00	15.47	1.6	1.90	0.63	22.7	2.28	0.0	0.00	0.00
C10	53.87	5.73	23.24	5.2	0.78	0.20	9.8	1.64	1.0	0.00	0.00
C7	55.38	8.36	22.76	6.1	0.41	0.26	4.9	2.77	0.5	0.00	0.00
C4	53.11	9.85	22.67	8.7	0.27	0.13	2.9	2.07	0.3	0.00	0.00
C3	53.39	10.58	21.96	8.6	0.25	0.13	2.7	2.04	0.3	0.00	0.00
C2	49.70	11.00	19.50	10.2	0.57	0.09	2.0	1.97	4.9	0.03	0.04
Confluence	49.64	11.02	19.51	10.3	0.57	0.09	2.1	1.98	4.8	0.03	0.04

Appendix C

Land Uses (Percent of Total) in the Court Creek Watershed Above Stream
Sampling Stations, 1950

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Drainage Basin	RC	WPAS	PAS	WDS	WTR	CFL	URB	NP	AM	IMR	IMP
S5	45.56	14.48	4.98	10.4	0.52	0	0.0	0.95	23.1	0	0
S3	43.10	22.63	10.25	9.7	0.43	0	0.0	1.36	11.7	0	0
S2	41.96	26.08	10.43	9.8	0.35	0	0.0	1.37	9.3	0	0
Confluence	42.04	26.58	10.20	9.7	0.34	0	0.0	1.37	9.1	0	0
N4	51.35	22.64	18.97	2.9	0.02	0	2.6	1.51	0.0	0	0
N3	49.94	25.69	17.17	3.5	0.02	0	2.2	1.51	0.0	0	0
N2	49.53	26.55	17.10	3.3	0.02	0	2.0	1.48	0.0	0	0
N1	49.37	26.90	16.84	3.5	0.02	0	2.0	1.45	0.0	0	0
M3	69.41	11.51	16.04	0.8	0.00	0	0.0	2.27	0.0	0	0
M1	57.07	19.19	20.86	0.9	0.00	0	0.0	2.01	0.0	0	0
Confluence	55.31	19.92	20.96	1.9	0.00	0	0.0	1.92	0.0	0	0
C12	57.59	0.73	12.87	0.2	1.74	0	24.0	2.92	0.0	0	0
C10	52.57	9.46	22.31	1.2	0.68	0	9.9	2.86	1.0	0	0
C7	53.63	12.17	24.25	1.6	0.35	0	4.9	2.56	0.5	0	0
C4	52.57	19.51	19.90	2.4	0.18	0	3.2	2.00	0.2	0	0
C3	52.90	19.88	19.31	2.5	0.17	0	3.0	1.96	0.2	0	0
C2	50.25	21.57	16.85	4.5	0.21	0	2.3	1.81	2.3	0	0
Confluence	50.25	21.59	16.80	4.5	0.20	0	2.4	1.80	2.3	0	0

Appendix C

Land Uses (Percent of Total) in the Court Creek Watershed Above Stream
Sampling Stations, 1940

Drainage Basin	RC	WPAS	PAS	WDS	WTR	CFL	URB	NP	AM	IMR	IMP
S5	48.79	18.18	11.94	19.5	0.00	0.00	0.0	1.58	0.00	0	0
S3	44.49	17.07	20.62	13.8	0.07	0.00	0.0	1.55	2.33	0	0
S2	43.04	15.67	23.50	14.4	0.06	0.00	0.0	1.51	1.86	0	0
Confluence	43.08	16.08	23.19	14.3	0.05	0.00	0.0	1.51	1.81	0	0
N4	50.80	10.11	26.59	8.6	0.01	0.00	2.4	1.46	0.00	0	0
N3	48.13	13.04	26.36	9.0	0.01	0.00	2.0	1.48	0.00	0	0
N2	47.55	13.99	26.15	8.9	0.01	0.00	1.9	1.49	0.00	0	0
N1	47.54	13.57	26.56	9.0	0.01	0.00	1.8	1.48	0.00	0	0
M3	67.73	1.33	25.93	2.7	0.00	0.00	0.0	2.36	0.00	0	0
M1	56.06	13.04	24.94	3.7	0.00	0.00	0.0	2.24	0.00	0	0
Confluence	54.52	12.73	24.81	5.8	0.00	0.00	0.0	2.15	0.00	0	0
C12	55.43	3.62	13.95	0.5	1.73	0.00	22.7	2.02	0.00	0	0
C10	50.25	2.77	28.30	3.4	0.69	0.00	11.1	2.33	1.16	0	0
C7	51.95	6.47	28.81	4.1	0.34	0.00	5.6	2.12	0.70	0	0
C4	50.69	9.60	27.71	6.2	0.17	0.01	3.5	1.86	0.33	0	0
C3	51.13	9.48	27.86	6.0	0.15	0.01	3.2	1.80	0.31	0	0
C2	49.10	11.08	26.53	8.3	0.13	0.01	2.4	1.75	0.66	0	0
Confluence	49.05	11.08	26.46	8.4	0.13	0.01	2.5	1.75	0.66	0	0

Appendix D

Stages of Water Level
at Gaging Stations on Court Creek Watershed

Appendix D
 Stages of Water Level at Gaging Stations
 on Court Creek Watershed

Date	S5	S3	S2	N1	M3	M1	C12	C10	C2
11/19/80	1.32	1.22	14.26	0.98		3.00	1.32	0.86	0.74
11/21/80	-	-	14.25	0.93		2.58	1.32	0.84	0.86
11/26/80	-	-	14.30	0.96		2.62	1.36	0.86	0.57
12/1/80	-	-	14.27	0.90		2.60	0.98	0.86	0.82
12/5/80	1.92	-	14.48	0.98		2.63	1.30	0.96	0.46
12/8/80	2.68	-	15.18	3.12		3.76	1.60	2.24	3.52
12/9/80	1.98	-	14.36	2.02		3.07	1.52	1.40	2.40
12/15/80	1.27	1.26	14.38	1.28		2.93	1.30	0.96	1.10
12/17/80	1.10	1.36	14.32	1.20		2.64	1.28	0.98	0.98
12/18/80	1.08	1.26	14.36	1.20		2.73	1.28	0.90	0.98
2/22/81	2.22	1.78	15.08	2.80		3.95	1.18	2.20	2.48
3/3/81	1.10	0.42	-	1.14		2.65	1.08	0.82	0.50
4/12/81	2.40	1.46	14.70	2.78		3.75	1.92	2.00	4.20
4/13/81	2.28	1.50	14.58	2.74		3.63	1.92	2.08	4.48
4/14/81	2.56	2.43	14.60	2.46		3.60	1.92	2.08	7.74
4/15/81	1.84	1.66	14.72	1.98		3.20	1.66	1.56	8.68
4/16/81	1.68	1.56	14.34	1.78		3.24	1.54	1.38	3.42
4/20/81	1.30	1.12	14.15	1.44		2.93	1.38	1.12	1.43
4/28/81	3.38	1.75	15.02	8.50		4.31	1.58	2.45	9.30
4/29/81	2.48	1.46	14.40	2.58		3.16	1.46	1.48	6.78
5/4/81	1.14	1.16	13.90	1.44		2.97	1.34	1.08	1.64
5/11/81	1.45	1.20	13.98	1.48		2.97	1.12	1.10	1.78
5/12/81	1.30	1.22	14.04	1.32		2.87	1.08	0.92	1.46
5/14/81	3.46	1.90	15.60	4.24		4.10	1.80	3.76	3.98
5/21/81	1.08	1.22	13.92	1.44		2.86	1.28	1.08	1.48
5/26/81	1.08	0.98	13.87	1.16		2.82	1.18	0.98	1.08
6/2/81	1.00	0.82	13.64	1.06		2.62	1.12	0.76	0.78
6/8/81	0.80	0.64	-	0.96		2.58	1.06	0.68	0.58
6/9/81	1.16	0.94	13.70	1.26		2.96	1.30	0.95	1.50
6/13/81	3.34	1.70	15.61	4.65		4.64	1.92	4.20	5.00
6/15/81	1.54	1.70	14.63	1.32		3.04	1.40	1.10	4.52
6/22/81	1.12	1.12	13.92	1.14		2.56	1.32	0.98	1.18
6/24/81	2.50	1.34	14.50	3.20		3.65	1.50	1.90	6.48
6/29/81	0.99	1.10	13.82	1.06		2.78	1.02	0.74	1.28
7/16/81	1.02	1.12	13.82	1.10		2.84	1.32	1.02	1.08
7/13/81	0.82	0.70	13.56	0.80		2.61	1.06	0.68	0.70
7/20/81	0.86	0.70	13.44	0.78		2.54	1.02	0.70	0.60
7/27/81	0.98	1.12	13.98	1.11		2.94	1.24	0.74	1.04
7/28/81	2.16	1.56	14.38	2.72		3.30	1.19	1.99	3.16
8/2/81	4.90	1.70	14.83	4.74		5.12	1.96	1.32	4.75
8/3/81	2.39	1.82	14.60	1.39		2.93	1.12	0.90	4.71
8/10/81	1.08	1.38	14.24	0.96		2.71	1.07	0.68	1.21
8/17/81	1.21	1.55	14.29	1.02		2.68	1.05	0.66	7.18
8/24/81	0.87	0.88	13.78	0.68		2.66	0.94	0.52	0.77
8/31/81	0.83	0.76	13.69	0.71		2.72	0.99	0.58	0.77
9/7/81	0.77	0.63	13.55	0.90		2.59	0.91	0.48	0.49
9/14/81	0.76	0.52	13.49	1.27		2.76	0.89	0.46	0.38
9/21/81	0.71	0.47	13.43	1.65		2.86	0.88	0.45	0.32
9/28/81	0.80	0.48	13.39	0.51		2.78	0.92	0.48	0.36
10/5/81	0.78	0.46	13.43	0.57		2.96	1.34	0.49	0.46
10/12/81	0.77	0.53	13.47	0.91		2.90	0.88	0.50	0.32
10/13/81	0.76	0.56	13.41	0.52		2.61	0.88	0.50	0.33
10/14/81	0.96	0.61	13.57	0.83		3.14	1.12	0.92	0.76
10/15/81	0.89	0.60	14.42	0.69		2.83	0.92	0.59	1.29
10/19/81	0.93	0.50	14.32	0.82		2.62	1.23	0.57	1.10
10/26/81	0.83	0.40	14.24	1.30		2.66	0.96	0.55	0.84

Appendix E

Precipitation Data at 13 Rain Gage Stations
on Court Creek Watershed

Appendix E

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
1	12	6	80	18:13	1.4	0.04
1	12	6	80	21:21	10.1	0.94
2	12	6	80	21:12	10.3	0.79
3	12	6	80	21:23	10.0	0.71
4	12	6	80	21:50	9.8	0.47
5	12	6	80	21:13	6.0	0.50
6	12	6	80	21:17	2.4	0.27
7	12	6	80	21:38	0.9	0.03
7	12	6	80	22:42	8.8	0.45
8	12	6	80	22:54	2.6	0.16
9	12	6	80	21:56	3.5	0.19
10	12	6	80	22:00	1.8	0.14
11	12	6	80	22:46	1.1	0.16
12	12	6	80	22:56	3.1	0.12
13	12	6	80	21:17	3.7	0.36
1	12	7	80	10:43	11.6	1.11
1	12	7	80	23:38	7.9	0.41
2	12	7	80	10:28	11.7	1.24
3	12	7	80	10:40	10.1	1.42
3	12	7	80	21:08	10.6	0.49
4	12	7	80	10:43	10.0	1.36
4	12	7	80	21:46	10.1	0.35
5	12	7	80	04:02	3.1	0.20
5	12	7	80	08:53	12.3	1.38
6	12	7	80	01:12	6.1	0.41
6	12	7	80	10:15	11.2	1.48
7	12	7	80	10:18	10.1	1.39
8	12	7	80	02:15	5.1	0.29
8	12	7	80	10:31	9.7	1.38
8	12	7	80	20:44	11.2	0.45
9	12	7	80	02:21	5.1	0.41
9	12	7	80	10:17	10.9	1.61
10	12	7	80	02:02	5.6	0.41
10	12	7	80	09:55	10.9	1.35
10	12	7	80	23:34	7.9	0.46
11	12	7	80	02:13	5.3	0.37
11	12	7	80	08:42	13.6	1.42
12	12	7	80	02:16	5.4	0.35
12	12	7	80	10:15	11.8	1.42
13	12	7	80	02:03	5.3	0.39
13	12	7	80	10:09	12.3	1.47
1	12	8	80	09:43	0.4	0.02
2	12	8	80	01:00	6.7	0.45
2	12	8	80	09:31	1.0	0.03
3	12	8	80	09:55	0.2	0.01
4	12	8	80	09:55	0.4	0.01
5	12	8	80	01:10	5.5	0.40
5	12	8	80	14:03	17.2	0.11
6	12	8	80	01:05	6.5	0.43
6	12	8	80	11:17	19.7	0.12
7	12	8	80	00:12	7.4	0.43
7	12	8	80	08:23	0.4	0.02
8	12	8	80	10:03	0.5	0.02
9	12	8	80	00:20	7.5	0.47
9	12	8	80	10:05	0.7	0.02
10	12	8	80	09:42	0.4	0.01
11	12	8	80	00:12	7.4	0.46
11	12	8	80	10:04	0.3	0.01

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
12	12	8	80	00:59	6.8	0.46
13	12	8	80	00:26	6.6	0.44
13	12	8	80	11:29	0.2	0.02
1	12	9	80	04:40	1.6	0.05
2	12	9	80	04:28	2.8	0.13
3	12	9	80	05:28	1.6	0.06
4	12	9	80	05:32	1.8	0.05
7	12	9	80	03:43	3.0	0.10
8	12	9	80	05:01	1.9	0.07
9	12	9	80	04:38	2.4	0.09
10	12	9	80	05:01	1.8	0.07
11	12	9	80	04:55	1.9	0.07
12	12	9	80	04:58	2.2	0.06
12	12	9	80	09:27	1.8	0.02
13	12	9	80	05:14	2.2	0.10
11	12	10	80	04:58	1.9	0.03
12	12	10	80	05:03	2.2	0.03
13	12	10	80	02:30	4.4	0.04
1	12	23	80	20:25	4.1	0.19
2	12	23	80	20:19	4.2	0.14
3	12	23	80	20:13	4.3	0.16
4	12	23	80	20:21	4.4	0.14
5	12	23	80	20:17	4.3	0.16
6	12	23	80	20:14	4.4	0.14
7	12	23	80	20:24	6.2	0.21
8	12	23	80	20:12	7.0	0.19
9	12	23	80	19:59	5.6	0.20
10	12	23	80	20:00	4.6	0.14
11	12	23	80	21:01	3.6	0.15
12	12	23	80	20:18	4.7	0.17
13	12	23	80	20:11	6.5	0.19
1	1	31	81	20:47	4.7	0.24
2	1	31	81	20:55	5.9	0.15
3	1	31	81	21:03	7.0	0.11
4	1	31	81	21:30	4.0	0.07
5	1	31	81	20:52	3.8	0.09
6	1	31	81	21:34	5.2	0.10
7	1	31	81	21:07	5.4	0.10
8	1	31	81	21:01	7.1	0.20
9	1	31	81	20:58	5.8	0.18
10	1	31	81	20:57	6.3	0.12
11	1	31	81	23:00	6.8	0.08
12	1	31	81	20:55	6.8	0.24
13	1	31	81	20:49	8.0	0.20
4	2	7	81	23:44	6.2	0.29
13	2	7	81	23:13	7.0	0.22
1	2	8	81	02:05	3.7	0.05
1	2	8	81	12:43	15.6	0.26
3	2	8	81	00:32	5.3	0.16
2	2	8	81	12:17	2.8	0.05
3	2	8	81	18:08	10.2	0.10
4	2	8	81	11:48	3.1	0.05
5	2	8	81	00:00	5.1	0.12
5	2	8	81	10:10	3.9	0.02
6	2	8	81	00:59	4.0	0.07
6	2	8	81	10:52	3.9	0.07
7	2	8	81	00:16	4.0	0.05
7	2	8	81	08:38	11.2	0.16

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
8	2	8	81	00:46	5.1	0.16
8	2	8	81	07:04	11.5	0.17
9	2	8	81	00:03	5.7	0.20
9	2	8	81	08:59	10.3	0.14
10	2	8	81	00:00	6.1	0.22
10	2	8	81	12:36	2.0	0.02
11	2	8	81	00:21	4.7	0.15
11	2	8	81	08:26	9.8	0.15
12	2	8	81	01:05	5.2	0.18
12	2	8	81	08:17	7.0	0.13
13	2	8	81	06:58	6.6	0.04
1	2	22	81	00:01	12.5	0.62
2	2	22	81	00:01	13.0	0.77
3	2	22	81	00:01	13.6	0.66
4	2	22	81	00:01	9.6	0.69
5	2	22	81	00:01	14.5	0.68
6	2	22	81	00:01	11.7	0.68
7	2	22	81	00:01	12.0	0.59
8	2	22	81	00:01	10.5	0.67
9	2	22	81	00:01	12.8	0.64
10	2	22	81	00:01	11.4	0.68
11	2	22	81	00:01	12.3	0.52
12	2	22	81	00:01	8.2	0.74
13	2	22	81	00:01	13.1	0.71
1	2	22	81	09:15	10.1	0.40
2	2	22	81	09:16	4.3	0.36
2	2	22	81	23:44	6.7	0.10
73	2	22	81	09:07	6.3	0.33
4	2	22	81	08:19	5.1	0.31
4	2	22	81	23:28	5.6	0.05
5	2	22	81	09:08	2.6	0.36
5	2	22	81	16:01	14.5	0.10
6	2	22	81	09:19	3.8	0.32
6	2	22	81	17:57	13.2	0.18
7	2	22	81	09:22	4.1	0.28
7	2	22	81	20:21	10.3	0.12
8	2	22	81	09:02	6.9	0.29
8	2	22	81	21:09	9.6	0.14
9	2	22	81	08:56	4.6	0.33
9	2	22	81	20:00	10.7	0.22
10	2	22	81	09:01	4.5	0.32
10	2	22	81	18:39	11.2	0.11
11	2	22	81	08:53	4.6	0.30
11	2	22	81	23:57	1.7	0.04
12	2	22	81	08:42	9.3	0.29
12	2	22	81	21:56	8.9	0.15
13	2	22	81	08:59	2.7	0.34
13	2	22	81	19:21	11.4	0.22
1	2	23	81	00:17	6.2	0.09
2	2	23	81	08:37	1.8	0.04
3	2	23	81	01:30	3.5	0.06
9	2	23	81	08:18	2.9	0.05
2	3	1	81	00:01	7.9	0.21
5	3	1	81	00:01	10.7	0.25
7	3	1	81	00:01	10.3	0.26
10	3	1	81	00:01	10.8	0.27
12	3	1	81	00:01	11.8	0.28
13	3	1	81	00:01	11.8	0.27

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
1	3	1	81	01:47	9.7	0.17
3	3	1	81	00:02	9.8	0.23
4	3	1	81	00:00	9.4	0.24
6	3	1	81	05:14	6.1	0.23
9	3	1	81	00:00	10.1	0.22
11	3	1	81	00:01	9.5	0.26
1	3	29	81	01:21	3.0	0.10
1	3	29	81	07:32	3.1	0.27
1	3	29	81	18:25	1.2	0.06
1	3	29	81	23:25	0.8	0.02
2	3	29	81	01:10	2.8	0.10
2	3	29	81	07:30	3.2	0.28
2	3	29	81	17:24	2.4	0.09
2	3	29	81	23:16	0.5	0.02
3	3	29	81	01:24	3.6	0.09
3	3	29	81	07:46	3.0	0.32
3	3	29	81	18:15	1.7	0.09
3	3	29	81	23:25	0.7	0.03
4	3	29	81	01:37	3.3	0.08
4	3	29	81	07:42	3.0	0.34
4	3	29	81	19:28	0.6	0.13
4	3	29	81	23:29	1.0	0.05
5	3	29	81	00:59	4.4	0.09
5	3	29	81	07:26	3.0	0.24
5	3	29	81	17:10	2.5	0.06
5	3	29	81	23:11	0.7	0.03
6	3	29	81	01:14	4.3	0.09
6	3	29	81	07:35	3.1	0.30
6	3	29	81	17:29	2.3	0.08
7	3	29	81	01:25	3.7	0.10
7	3	29	81	07:35	3.6	0.31
7	3	29	81	17:39	2.3	0.11
7	3	29	81	23:33	1.4	0.04
8	3	29	81	01:24	3.9	0.09
8	3	29	81	07:33	3.4	0.36
8	3	29	81	17:49	2.1	0.12
9	3	29	81	01:18	2.9	0.11
9	3	29	81	07:29	4.4	0.27
9	3	29	81	18:22	1.8	0.09
10	3	29	81	01:22	4.4	0.14
10	3	29	81	07:30	3.0	0.30
10	3	29	81	19:24	1.1	0.11
11	3	29	81	01:45	3.8	0.08
11	3	29	81	07:30	3.3	0.30
11	3	29	81	18:15	1.9	0.43
12	3	29	81	01:23	4.1	0.09
12	3	29	81	07:30	3.1	0.44
12	3	29	81	17:58	1.8	0.11
12	3	29	81	23:38	0.8	0.03
13	3	29	81	01:14	4.3	0.10
13	3	29	81	07:28	2.8	0.21
13	3	29	81	17:21	2.5	0.08
13	3	29	81	23:12	2.4	0.03
10	3	30	81	00:05	0.4	0.03
1	4	8	81	17:36	2.3	0.40
2	4	8	81	17:40	3.2	0.45
3	4	8	81	17:37	3.6	0.35
4	4	8	81	17:43	3.2	0.33

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
5	4	8	81	17:31	3.6	0.35
6	4	8	81	17:44	3.5	0..26
7	4	8	81	17:51	4.2	0.16
8	4	8	81	18:39	3.8	0.15
9	4	8	81	18:53	2.5	0.23
10	4	8	81	19:08	2.0	0.21
11	4	8	81	19:03	2.4	0.35
12	4	8	81	18:41	2.6	0.33
13	4	8	81	17:11	3.5	0.30
1	4	10	81	09:37	4.4	0.48
2	4	10	81	09:44	4.4	0.41
3	4	10	81	09:41	1.2	0.37
4	4	10	81	04:33	0.4	0.04
4	4	10	81	09:49	1.6	0.34
5	4	10	81	09:41	4.3	0.41
6	4	10	81	09:48	4.5	0.36
7	4	10	81	09:49	4.3	0.38
8	4	10	81	09:54	3.2	0.38
9	4	10	81	09:58	3.5	0.45
10	4	10	81	09:45	1.9	0.46
11	4	10	81	09:53	2.3	0.47
12	4	10	81	09:59	2.1	0.41
13	4	10	81	09:09	2.1	0.40
1	4	11	81	10:25	3.3	0.29
1	4	11	81	20:53	8.8	1.68
2	4	11	81	10:25	3.3	0.27
2	4	11	81	20:58	8.9	1.54
3	4	11	81	10:25	3.2	0.23
3	4	11	81	21 :03	9.0	1.54
4	4	11	81	11 :03	2.6	0.17
4	4	11	81	21 :07	8.5	1.20
5	4	11	81	10:11	3.8	0.32
5	4	11	81	20:22	9.3	1.63
6	4	11	81	10:27	3.8	0.29
6	4	11	81	20:33	9.2	1.30
7	4	11	81	10:46	3.4	0.20
7	4	11	81	20:36	9.7	0.99
8	4	11	81	10:44	3.4	0.18
8	4	11	81	21 :41	8.9	1.21
9	4	11	81	10:26	3.9	0.31
9	4	11	81	20:35	10.4	1.25
10	4	11	81	10:17	3.8	0.29
10	4	11	81	20:30	9.0	1.27
11	4	11	81	10:25	3.6	0.28
11	4	11	81	20:42	9.3	1.65
12	4	11	81	10:43	3.3	0.17
12	4	11	81	22:45	8.1	1.56
13	4	11	81	09:46	3.6	0.32
13	4	11	81	19:50	9.9	1.51
1	4	13	81	00:01	6.1	0.48
2	4	13	81	00:01	6.1	0.44
3	4	13	81	00:01	6.2	0.45
4	4	13	81	00:01	5.8	0.49
5	4	13	81	00:01	6.7	0.45
6	4	13	81	00:01	7.3	0.38
7	4	13	81	00:01	11.7	0.38
8	4	13	81	00:01	1 .7	0.36
9	4	13	81	00:01	7.8	0.35

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
10	4	13	81	00:01	7.0	0.33
11	4	13	81	00:01	5.8	0.23
12	4	13	81	00:01	6.4	0.21
13	4	13	81	00:01	10.7	0.53
1	4	13	81	21:11	2.3	0.45
2	4	13	81	20:04	3.3	0.43
3	4	13	81	19:17	4.2	0.40
4	4	13	81	19:21	4.3	0.54
5	4	13	81	20:14	9.2	0.37
6	4	13	81	20:16	3.4	0.45
7	4	13	81	19:33	4.0	0.66
8	4	13	81	19:58	3.7	0.69
9	4	13	81	19:45	7.6	0.58
10	4	13	81	19:24	4.0	0.54
11	4	13	81	19:53	3.7	0.69
12	4	13	81	02:22	3.1	0.21
12	4	13	81	20:22	3.4	0.89
13	4	13	81	18:51	7.3	0.45
1	4	19	81	05:07	4.2	0.34
2	4	19	81	05:12	7.3	0.35
3	4	19	81	05:50	6.4	0.30
4	4	19	81	06:10	6.6	0.32
5	4	19	81	05:00	9.3	0.39
6	4	19	81	06:01	8.6	0.30
7	4	19	81	06:07	6.1	0.28
8	4	19	81	05:55	7.2	0.38
9	4	19	81	05:00	8.8	0.42
10	4	19	81	06:01	8.2	0.37
11	4	19	81	05:43	8.4	0.45
12	4	19	81	03:57	16.3	0.46
13	4	19	81	04:59	9.3	0.40
1	4	22	81	08:45	3.3	0.55
1	4	22	81	14:47	0.9	0.15
1	4	22	81	18:07	1.1	0.23
2	4	22	81	08:43	2.5	0.35
2	4	22	81	14:49	0.9	0.13
2	4	22	81	18:05	1.0	0.23
3	4	22	81	08:42	1.6	0.16
3	4	22	81	14:43	1.1	0.09
3	4	22	81	18:01	1.2	0.28
4	4	22	81	08:51	3.0	0.43
4	4	22	81	14:54	1.1	0.05
4	4	22	81	18:10	0.6	0.18
5	4	22	81	08:46	3.2	0.49
5	4	22	81	14:40	1.2	0.06
5	4	22	81	16:57	2.2	0.20
6	4	22	81	08:45	3.5	0.52
6	4	22	81	14:37	1.2	0.10
6	4	22	81	18:02	1.3	0.25
7	4	22	81	08:54	2.4	0.39
7	4	22	81	11:36	4.3	0.07
7	4	22	81	18:12	1.2	0.20
8	4	22	81	07:40	3.4	0.47
8	4	22	81	11:36	0.8	0.04
8	4	22	81	18:10	1.5	0.60
9	4	22	81	08:39	4.2	0.52
9	4	22	81	18:01	1.4	0.27
10	4	22	81	08:37	3.6	0.55

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
10	4	22	81	18:04	1.4	0.34
11	4	22	81	15:16	0.6	0.05
11	4	22	81	18:03	1.6	0.42
12	4	22	81	06:25	4.4	0.58
12	4	22	81	10:57	4.8	0.16
12	4	22	81	18:12	1.5	0.31
13	4	22	81	08:40	6.9	0.52
13	4	22	81	17:59	1.3	0.31
1	4	28	81	10:23	4.5	2.24
2	4	28	81	10:10	4.4	2.22
3	4	28	81	09:58	4.2	2.21
4	4	28	81	10:28	3.9	1.80
5	4	28	81	10:20	4.0	0.82
6	4	28	81	10:04	4.4	0.93
7	4	28	81	09:49	4.8	1.05
8	4	28	81	10:09	4.4	1.42
9	4	28	81	10:18	3.9	1.12
10	4	28	81	13:05	1.2	1.42
11	4	28	81	10:07	4.4	1.23
12	4	28	81	07:52	2.0	1.75
13	4	28	81	10:17	3.8	0.74
1	4	29	81	18:05	0.8	0.08
2	4	29	81	18:01	2.2	0.09
3	4	29	81	17:58	2.2	0.06
4	4	29	81	18:03	0.9	0.04
5	4	29	81	10:31	1.2	0.04
5	4	29	81	18:09	0.7	0.06
5	4	29	81	19:56	1.0	0.08
6	4	29	81	18:09	0.8	0.13
6	4	29	81	20:00	0.7	0.07
7	4	29	81	18:18	0.7	0.07
7	4	29	81	20:02	0.9	0.05
8	4	29	81	18:09	2.1	0.11
8	4	29	81	20:03	0.8	0.01
9	4	29	81	10:35	1.2	0.02
9	4	29	81	18:14	0.7	0.14
9	4	29	81	19:58	1.0	0.04
10	4	29	81	18:20	0.9	0.06
10	4	29	81	20:04	1.0	0.08
11	4	29	81	18:19	0.8	0.07
11	4	29	81	20:02	1.3	0.08
12	4	29	81	18:16	0.7	0.13
12	4	29	81	20:04	0.7	0.07
13	4	29	81	18:19	2.4	0.11
1	4	30	81	22:04	0.5	0.04
5	4	30	81	22:06	1.0	0.03
10	4	30	81	22:06	2.1	0.05
11	4	30	81	22:14	0.6	0.05
12	4	30	81	22:17	0.9	0.04
13	4	30	81	22:23	1.0	0.05
1	5	1	81	00:37	0.4	0.03
2	5	1	81	00:45	0.3	0.05
6	5	1	81	00:41	0.6	0.04
7	5	1	81	00:57	0.4	0.03
8	5	1	81	00:54	0.4	0.02
12	5	1	81	00:51	0.5	0.03
1	5	4	81	14:35	1.2	0.05
1	5	4	81	19:49	0.4	0.06

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUIMI INCHES
2	5	4	81	14:32	1.4	0.06
2	5	4	81	18:53	0.4	0.03
3	5	4	81	13:04	2.4	0.07
3	5	4	81	18:26	1.0	0.08
4	5	4	81	12:34	2.7	0.14
4	5	4	81	18:40	0.7	0.07
5	5	4	81	14:00	1.8	0.07
5	5	4	81	18:30	0.8	0.07
6	5	4	81	12:31	3.0	0.10
7	5	4	81	12:38	3.2	0.15
7	5	4	81	18:10	0.8	0.04
8	5	4	81	11:30	4.1	0.16
8	5	4	81	18:11	1.0	0.04
9	5	4	81	11:14	4.2	0.10
9	5	4	81	18:38	1.0	0.05
10	5	4	81	09:53	5.7	0.12
10	5	4	81	18:52	1.2	0.04
11	5	4	81	12:14	3.3	0.14
12	5	4	81	10:23	5.1	0.18
12	5	4	81	18:13	1.2	0.02
13	5	4	81	12:41	2.7	0.08
13	5	4	81	18:25	0.8	0.05
1	5	9	81	14:07	9.0	0.35
2	5	9	81	14:40	9.2	0.37
3	5	9	81	14:41	11.8	0.62
4	5	9	81	17:56	6.3	0.60
5	5	9	81	14:04	10.7	0.43
6	5	9	81	15:08	10.4	0.43
7	5	9	81	15:36	9.5	0.73
8	5	9	81	15:23	10.1	0.87
9	5	9	81	14:02	12.6	0.53
10	5	9	81	13:57	13.2	0.64
11	5	9	81	15:38	13.4	0.84
12	5	9	81	15:14	9.6	1.12
13	5	9	81	14:08	12.0	0.55
1	5	10	81	07:22	6.5	0.22
2	5	10	81	05:33	11.6	0.50
3	5	10	81	07:18	9.5	0.52
4	5	10	81	07:11	10.2	0.52
5	5	10	81	06:02	10.5	0.45
6	5	10	81	07:29	10.6	0.35
7	5	10	81	07:24	9.3	0.49
8	5	10	81	06:55	9.6	0.51
9	5	10	81	06:54	9.3	0.49
10	5	10	81	07:27	7.8	0.52
11	5	10	81	07:27	9.6	0.73
12	5	10	81	06:39	10.9	0.70
13	5	10	81	06:22	10.8	0.41
1	5	13	81	18:12	15.4	0.79
2	5	13	81	18:05	15.6	1.08
3	5	13	81	20:10	13.6	1.18
4	5	13	81	20:25	13.4	1.06
5	5	13	81	20:55	12.5	1.09
6	5	13	81	18:21	15.5	0.96
7	5	13	81	20:23	13.4	1.23
8	5	13	81	20:17	14.1	1.21
9	5	13	81	19:24	4.2	1.11
10	5	13	81	18:23	15.0	1.12

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
11	5	13	81	20:04	13.8	1.17
12	5	13	81	17:57	16.2	1.40
13	5	13	81	20:15	13.5	1.07
2	5	14	81	15:23	3.8	0.11
3	5	14	81	15:36	3.8	0.11
4	5	14	81	15:06	3.8	0.13
5	5	14	81	15:24	3.2	0.07
6	5	14	81	15:45	1.8	0.07
7	5	14	81	15:30	4.2	0.17
8	5	14	81	15:24	5.0	0.16
9	5	14	81	15:17	5.8	0.11
10	5	14	81	14:59	4.3	0.14
11	5	14	81	15:14	3.7	0.19
12	5	14	81	15:07	4.3	0.16
13	5	14	81	15:34	6.9	0.05
1	5	18	81	02:11	4.8	0.33
2	5	18	81	02:47	5.7	0.36
3	5	18	81	03:03	4.1	0.32
4	5	18	81	02:47	4.4	0.37
5	5	18	81	02:46	5.6	0.34
6	5	18	81	03:00	5.3	0.32
7	5	18	81	03:04	5.2	0.36
8	5	18	81	02:56	5.4	0.35
9	5	18	81	01:58	6.0	0.37
10	5	18	81	03:00	4.4	0.40
11	5	18	81	02:45	4.3	0.39
12	5	18	81	03:12	4.4	0.37
13	5	18	81	00:56	7.6	0.41
2	5	23	81	14:01	0.9	0.05
3	5	23	81	14:10	0.6	0.05
4	5	23	81	14:11	0.7	0.10
5	5	23	81	13:53	0.8	0.07
6	5	23	81	14:07	0.7	0.11
7	5	23	81	14:56	0.6	0.07
8	5	23	81	14:40	0.9	0.08
9	5	23	81	13:57	0.8	0.08
10	5	23	81	13:57	0.8	0.10
11	5	23	81	14:18	0.8	0.14
12	5	23	81	14:48	0.8	0.04
13	5	23	81	13:57	0.7	0.04
1	5	26	81	16:00	3.0	0.38
2	5	26	81	15:54	3.3	0.37
3	5	26	81	15:54	3.3	0.47
4	5	26	81	15:48	3.7	0.57
5	5	26	81	16:07	3.1	0.40
6	5	26	81	16:10	3.3	0.35
7	5	26	81	16:13	3.6	0.30
8	5	26	81	17:17	2.5	0.43
9	5	26	81	16:29	3.4	0.35
10	5	26	81	16:54	2.7	0.30
11	5	26	81	16:56	2.1	0.31
12	5	26	81	18:20	1.5	0.23
13	5	26	81	16:05	4.2	0.48
1	6	5	81	03:19	0.9	0.08
2	6	5	81	03:22	2.5	0.08
3	6	5	81	03:51	2.2	0.04
4	6	5	81	05:28	1.6	0.04
5	6	5	81	03:14	2.8	0.09

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
6	6	5	81	04:56	1.2	0.06
7	6	5	81	04:42	1.3	0.06
7	6	5	81	13:05	0.5	0.16
8	6	5	81	05:00	1.0	0.02
8	6	5	81	13:10	0.5	0.53
10	6	5	81	05:43	1.0	0.05
11	6	5	81	03:55	1.2	0.03
11	6	5	81	13:01	0.5	0.23
12	6	5	81	03:10	1.3	0.06
12	6	5	81	13:08	2.5	0.13
13	6	5	81	03:26	0.3	0.09
1	6	8	81	18:13	1.3	1.00
2	6	8	81	18:17	1.3	1.14
3	6	8	81	18:21	1.4	1.17
4	6	8	81	18:29	0.9	1.14
5	6	8	81	18:28	1.1	0.98
6	6	8	81	18:30	1.2	1.15
7	6	8	81	18:29	1.3	0.96
8	6	8	81	18:19	1.0	0.90
9	6	8	81	18:37	0.8	0.67
10	6	8	81	18:34	1.0	0.86
11	6	8	81	18:27	0.8	0.95
12	6	8	81	18:33	0.9	0.69
13	6	8	81	18:24	1.2	0.97
1	6	9	81	11:19	0.4	0.05
1	6	9	81	17:15	0.6	0.05
2	6	9	81	11:26	0.5	0.04
2	6	9	81	17:17	0.6	0.04
3	6	9	81	11:34	0.6	0.03
3	6	9	81	17:19	0.5	0.03
4	6	9	81	11:41	1.1	0.05
4	6	9	81	17:31	0.6	0.07
5	6	9	81	11:27	0.6	0.03
5	6	9	81	17:28	0.6	0.04
6	6	9	81	11:28	0.6	0.04
6	6	9	81	17:28	0.6	0.02
7	6	9	81	11:21	0.6	0.07
7	6	9	81	17:29	0.5	0.04
8	6	9	81	11:21	0.5	0.07
8	6	9	81	17:24	0.3	0.07
10	6	9	81	17:22	0.4	0.05
1	6	9	81	11:24	0.5	0.03
1	6	9	81	17:27	0.4	0.05
12	6	9	81	11:20	0.5	0.05
12	6	9	81	17:26	0.2	0.05
13	6	9	81	17:30	0.4	0.04
1	6	12	81	02:03	4.7	0.37
2	6	12	81	01:56	4.7	0.40
3	6	12	81	02:34	4.2	0.24
4	6	12	81	02:39	4.6	0.21
5	6	12	81	02:06	4.7	0.30
6	6	12	81	02:26	4.4	0.27
7	6	12	81	02:31	4.8	0.35
8	6	12	81	02:36	4.2	0.33
9	6	12	81	03:10	4.3	0.24
10	6	12	81	02:38	4.6	0.15
11	6	12	81	02:08	5.0	0.19
12	6	12	81	03:46	3.6	0.28

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
13	6	12	81	02:34	4.8	0.15
1	6	13	81	02:07	8.9	1.28
2	6	13	81	01:59	8.9	1.28
3	6	13	81	02:12	10.5	1.42
4	6	13	81	02:02	9.1	1.36
5	6	13	81	01:52	11.5	1.44
6	6	13	81	02:13	10.4	1.17
7	6	13	81	01:59	10.5	2.25
8	6	13	81	00:58	11.2	2.35
9	6	13	81	01:41	10.6	1.76
10	6	13	81	01:49	10.3	1.98
11	6	13	81	01:34	11.2	1.94
12	6	13	81	02:00	11.3	1.46
13	6	13	81	01:51	10.6	2.14
1	6	15	81	10:00	2.1	0.44
1	6	15	81	16:58	3.9	0.42
2	6	15	81	10:06	2.2	0.31
2	6	15	81	16:28	3.4	0.46
3	6	15	81	10:13	2.4	0.19
3	6	15	81	17:57	4.9	0.49
4	6	15	81	10:16	2.2	0.08
4	6	15	81	18:01	5.2	0.41
5	6	15	81	10:02	2.1	0.25
5	6	15	81	17:45	4.8	0.46
6	6	15	81	12:07	0.4	0.15
6	6	15	81	18:01	3.0	0.45
7	6	15	81	10:13	2.3	0.07
7	6	15	81	17:51	5.1	0.41
8	6	15	81	10:16	2.3	0.21
8	6	15	81	18:06	4.8	0.43
9	6	15	81	10:18	2.0	0.05
9	6	15	81	17:41	5.1	0.45
10	6	15	81	10:09	2.1	0.06
10	6	15	81	17:50	5.2	0.42
11	6	15	81	09:59	2.4	0.12
11	6	15	81	17:28	5.1	0.33
12	6	15	81	10:20	2.3	0.33
12	6	15	81	18:21	4.4	0.46
13	6	15	81	10:31	2.2	0.06
13	6	15	81	17:55	5.2	0.36
1	6	19	81	03:00	0.8	0.36
2	6	19	81	03:00	0.6	0.51
3	6	19	81	03:03	0.8	0.48
4	6	19	81	03:04	0.9	0.50
4	6	19	81	15:18	0.8	0.05
5	6	19	81	03:14	0.6	0.30
5	6	19	81	15:35	0.5	0.05
6	6	19	81	03:10	1.1	0.33
7	6	19	81	03:24	0.9	0.17
8	6	19	81	03:29	1.1	0.24
9	6	19	81	03:38	1.9	0.42
10	6	19	81	03:33	1.8	0.41
11	6	19	81	03:19	2.3	0.57
11	6	19	81	15:42	0.4	0.04
12	6	19	81	03:34	2.3	0.84
3	6	20	81	10:32	0.6	0.03
4	6	20	81	10:30	0.8	0.05
5	6	20	81	10:32	0.5	0.05

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
8	6	20	81	10:22	0.6	0.06
9	6	20	81	10:28	0.8	0.04
10	6	20	81	10:15	0.8	0.10
11	6	20	81	10:17	1.1	0.10
12	6	20	81	10:33	0.6	0.06
1	6	21	81	19:20	2.0	0.16
2	6	21	81	19:20	2.1	0.26
3	6	21	81	19:21	2.5	0.24
4	6	21	81	19:21	2.5	0.28
5	6	21	81	19:20	2.4	0.12
6	6	21	81	20:54	1.1	0.08
7	6	21	81	19:48	1.7	0.10
8	6	21	81	19:20	2.0	0.15
9	6	21	81	19:07	2.1	0.10
10	6	21	81	19:11	2.0	0.09
11	6	21	81	19:16	2.0	0.15
12	6	21	81	19:28	2.1	0.23
13	6	21	81	20:25	1.5	0.10
1	6	24	81	02:57	15.8	1.35
2	6	24	81	21:30	0.6	0.05
2	6	24	81	02:46	2.9	1.19
2	6	24	81	17:44	1.0	0.04
3	6	24	81	02:46	2.2	1.19
3	6	24	81	17:44	1.0	0.04
3	6	24	81	21:38	1.9	0.08
4	6	24	81	02:45	2.8	1.14
4	6	24	81	18:25	0.5	0.06
5	6	24	81	02:59	3.6	1.18
5	6	24	81	16:18	2.4	0.19
6	6	24	81	03:00	2.3	1.04
6	6	24	81	16:30	2.3	0.14
7	6	24	81	03:13	2.2	1.11
7	6	24	81	18:19	0.7	0.08
8	6	24	81	02:40	3.3	1.37
8	6	24	81	13:48	0.3	0.02
8	6	24	81	16:32	5.4	0.16
9	6	24	81	02:59	7.1	1.20
9	6	24	81	17:10	0.6	0.16
9	6	24	81	19:08	0.4	0.05
10	6	24	81	02:52	3.5	1.11
10	6	24	81	09:40	0.4	0.18
10	6	24	81	17:14	0.5	0.09
11	6	24	81	02:53	2.2	1.33
11	6	24	81	09:49	0.4	0.16
11	6	24	81	17:48	1.8	0.12
12	6	24	81	03:08	2.9	1.53
12	6	24	81	10:02	0.4	0.19
12	6	24	81	17:23	1.6	0.15
13	6	24	81	02:53	3.7	1.33
13	6	24	81	17:01	0.7	0.17
13	6	24	81	18:51	0.7	0.03
1	6	25	81	19:17	0.7	0.05
9	6	25	81	18:01	0.4	0.04
5	6	28	81	02:20	1.1	0.11
11	6	28	81	02:49	0.8	0.03
12	6	28	81	03:01	0.6	0.06
13	6	28	81	02:17	1.0	0.06
1	6	29	81	19:08	3.6	0.65

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
2	6	29	81	19:13	4.4	0.82
3	6	29	81	19:12	4.1	1.11
4	6	29	81	19:12	3.8	1.40
5	6	29	81	19:14	3.7	0.68
6	6	29	81	19:13	3.7	1.36
7	6	29	81	19:16	3.5	1.18
8	6	29	81	19:14	3.9	0.77
9	6	29	81	19:20	3.2	0.59
10	6	29	81	19:17	3.3	0.69
11	6	29	81	19:24	3.4	0.79
12	6	29	81	19:31	3.5	0.89
13	6	29	81	19:17	3.3	0.74
1	7	4	81	00:01	13.1	1.09
2	7	4	81	00:01	11.6	0.73
3	7	4	81	00:01	10.6	0.56
4	7	4	81	00:43	7.6	0.47
5	7	4	81	00:01	13.5	1.68
6	7	4	81	00:01	10.8	0.63
7	7	4	81	00:01	10.9	0.50
8	7	4	81	00:01	9.9	0.64
9	7	4	81	00:01	15.0	1.15
10	7	4	81	00:01	14.0	1.03
11	7	4	81	00:01	13.4	0.94
12	7	4	81	00:01	12.7	0.85
13	7	4	81	00:01	17.5	1.89
1	7	15	81	03:21	3.1	0.25
2	7	15	81	03:23	3.0	0.21
3	7	15	81	03:24	2.9	0.20
4	7	15	81	03:26	2.8	0.16
5	7	15	81	04:17	2.0	0.26
6	7	15	81	04:08	2.5	0.21
7	7	15	81	01:45	4.8	0.33
8	7	15	81	01:28	5.2	0.40
9	7	15	81	04:17	2.0	0.26
10	7	15	81	03:03	3.3	0.19
11	7	15	81	01:29	4.6	0.23
12	7	15	81	01:51	4.7	0.49
13	7	15	81	00:01	6.6	0.06
1	7	18	81	20:37	7.1	0.31
2	7	18	81	20:37	7.1	0.31
3	7	18	81	22:35	4.9	0.09
4	7	18	81	22:35	4.9	0.09
5	7	18	81	20:29	6.0	0.14
6	7	18	81	01:27	3.6	0.05
7	7	18	81	20:21	8.4	0.68
8	7	18	81	20:30	6.5	0.29
9	7	18	81	19:15	6.3	0.24
10	7	18	81	19:35	7.2	0.48
11	7	18	81	19:59	7.0	0.53
12	7	18	81	19:56	7.1	0.93
13	7	18	81	00:11	5.6	0.10
1	7	25	81	20:26	0.8	1.63
2	7	25	81	20:23	0.9	1.39
3	7	25	81	20:20	1.0	1.25
4	7	25	81	20:17	1.0	1.22
5	7	25	81	20:28	1.4	0.60
6	7	25	81	20:39	1.2	1.11
7	7	25	81	20:51	1.1	1.62

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
8	7	25	81	20:37	1.3	1.50
9	7	25	81	20:40	1.2	0.46
10	7	25	81	20:43	1.2	0.46
11	7	25	81	20:53	1.0	0.28
12	7	25	81	20:45	1.2	0.84
13	7	25	81	20:34	1.3	0.52
1	7	26	81	10:39	2.8	0.26
2	7	26	81	10:39	2.8	0.27
3	7	26	81	10:40	2.9	0.28
4	7	26	81	10:40	2.9	0.29
5	7	26	81	10:31	2.7	0.41
6	7	26	81	10:34	2.8	0.40
7	7	26	81	10:48	2.9	0.36
8	7	26	81	10:30	3.0	0.35
10	7	26	81	09:55	3.3	0.46
11	7	26	81	08:59	4.4	0.44
12	7	26	81	10:03	3.2	0.42
13	7	26	81	10:27	2.7	0.41
1	7	27	81	05:10	4.0	0.41
2	7	27	81	05:22	3.7	0.38
3	7	27	81	05:22	3.7	0.37
4	7	27	81	05:35	3.4	0.33
5	7	27	81	03:55	5.0	0.46
6	7	27	81	04:58	3.9	0.30
7	7	27	81	04:20	4.6	0.29
8	7	27	81	03:53	4.4	0.23
8	7	27	81	11:59	0.8	0.04
9	7	27	81	04:29	3.8	0.22
10	7	27	81	04:38	4.1	0.23
11	7	27	81	05:47	9.7	0.26
12	7	27	81	04:57	3.8	0.26
13	7	27	81	01:38	6.8	0.46
1	7	28	81	00:01	7.3	0.71
2	7	28	81	00:01	6.3	0.80
3	7	28	81	00:01	6.3	0.80
4	7	28	81	00:01	5.4	1.00
5	7	28	81	00:01	5.9	0.59
6	7	28	81	00:01	6.2	1.22
7	7	28	81	00:01	5.9	1.02
8	7	28	81	00:01	8.3	1.01
9	7	28	81	00:01	7.9	0.84
10	7	28	81	00:01	6.6	0.65
11	7	28	81	00:01	6.8	0.46
12	7	28	81	00:01	7.4	0.42
13	7	28	81	00:01	7.7	0.67
1	8	2	81	13:45	2.3	0.70
2	8	2	81	13:29	2.3	0.70
3	8	2	81	14:14	2.3	0.69
4	8	2	81	13:27	3.4	2.08
5	8	2	81	13:01	3.3	1.22
6	8	2	81	13:48	2.3	1.15
7	8	2	81	13:40	2.7	1.33
8	8	2	81	13:20	3.4	1.58
9	8	2	81	13:18	2.8	0.89
10	8	2	81	13:45	2.3	0.65
11	8	2	81	13:27	3.0	1.31
12	8	2	81	13:32	3.4	1.24
1	8	5	81	11:08	0.6	0.78

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
1	8	5	81	13:21	2.4	0.73
2	8	5	81	11:12	0.5	1.04
2	8	5	81	13:19	2.1	0.70
3	8	5	81	11:19	0.5	0.63
3	8	5	81	13:20	2.2	0.88
4	8	5	81	11:28	0.6	0.37
4	8	5	81	13:43	2.2	1.03
5	8	5	81	11:07	0.4	0.49
5	8	5	81	13:18	2.2	0.44
6	8	5	81	11:04	0.5	0.45
6	8	5	81	13:20	2.3	0.43
7	8	5	81	08:34	3.2	0.32
7	8	5	81	13:59	2.1	0.53
8	8	5	81	11:21	0.7	0.25
8	8	5	81	13:23	2.7	0.65
9	8	5	81	04:36	1.1	0.14
9	8	5	81	10:37	0.5	0.56
9	8	5	81	13:46	2.1	0.39
10	8	5	81	11:02	0.5	0.44
10	8	5	81	13:12	2.6	0.45
11	8	5	81	11:05	0.6	0.28
11	8	5	81	13:16	2.6	0.54
12	8	5	81	05:40	0.6	0.13
12	8	5	81	08:31	1.1	0.15
12	8	5	81	11:07	0.7	0.38
12	8	5	81	13:58	1.9	0.58
13	8	5	81	11:02	0.4	0.42
13	8	5	81	13:10	2.4	0.54
1	8	6	81	22:43	0.8	0.25
2	8	6	81	22:44	0.8	0.24
3	8	6	81	22:59	0.7	0.14
5	8	6	81	22:42	0.8	0.26
6	8	6	81	22:45	0.8	0.23
7	8	6	81	22:55	0.7	0.14
8	8	6	81	23:02	0.8	0.14
9	8	6	81	23:02	0.5	0.04
10	8	6	81	22:59	0.7	0.22
11	8	6	81	22:51	0.6	0.18
12	8	6	81	23:02	0.8	0.18
13	8	6	81	22:48	2.7	0.22
1	8	14	81	09:32	0.7	0.16
1	8	14	81	22:25	2.7	1.23
2	8	14	81	09:38	0.9	0.18
2	8	14	81	22:26	2.1	1.63
3	8	14	81	09:45	0.8	0.16
3	8	14	81	22:22	2.6	1.78
4	8	14	81	09:45	0.8	0.19
4	8	14	81	22:31	2.7	1.23
5	8	14	81	06:51	3.5	0.18
5	8	14	81	22:34	2.9	0.84
6	8	14	81	06:54	3.4	0.20
6	8	14	81	22:32	2.7	1.15
7	8	14	81	06:48	3.6	0.26
7	8	14	81	22:37	2.6	1.26
8	8	14	81	06:45	3.7	0.35
8	8	14	81	22:34	2.6	1.12
9	8	14	81	07:29	2.7	0.34
9	8	14	81	22:55	2.1	0.77

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
10	8	14	81	07:42	2.6	0.24
10	8	14	81	23:09	1.9	0.86
11	8	14	81	07:42	2.8	0.34
11	8	14	81	23:08	1.9	0.77
12	8	14	81	07:22	3.0	0.36
12	8	14	81	22:38	2.6	0.71
13	8	14	81	06:56	3.3	0.16
13	8	14	81	23:14	2.2	0.74
5	8	24	81	18:55	1.1	0.06
13	8	24	81	18:32	1.1	0.08
5	8	25	81	14:33	0.8	0.05
13	8	25	81	14:24	4.8	0.07
1	8	26	81	18:47	0.6	0.22
2	8	26	81	18:54	0.7	0.14
5	8	26	81	18:56	0.4	0.04
13	8	26	81	18:59	0.4	0.04
1	8	27	81	13:41	0.3	0.04
1	8	27	81	21:40	0.4	0.09
2	8	27	81	21:53	0.5	0.06
3	8	27	81	21:30	0.3	0.09
5	8	27	81	13:37	0.4	0.11
5	8	27	81	22:08	0.5	0.04
6	8	27	81	21:42	0.6	0.11
8	8	27	81	13:09	0.6	0.10
9	8	27	81	13:11	0.4	0.13
9	8	27	81	21:26	0.4	0.18
10	8	27	81	21:35	0.5	0.15
11	8	27	81	13:16	0.5	0.10
11	8	27	81	21:26	0.5	0.10
12	8	27	81	12:48	0.7	0.48
13	8	27	81	13:27	0.3	0.19
1	8	28	81	21:18	0.2	0.07
2	8	28	81	21:23	0.3	0.20
5	8	28	81	21:21	0.3	0.09
6	8	28	81	21:19	3.2	0.10
11	8	28	81	15:22	0.4	0.16
13	8	28	81	14:09	0.4	0.04
1	8	30	81	14:59	6.1	0.15
2	8	30	81	15:00	6.2	0.41
3	8	30	81	15:13	6.2	0.18
4	8	30	81	16:53	1.4	0.11
5	8	30	81	15:17	6.3	0.29
6	8	30	81	15:27	6.0	0.32
7	8	30	81	15:26	6.1	0.35
8	8	30	81	15:28	6.1	0.32
9	8	30	81	13:55	7.3	0.49
10	8	30	81	14:44	6.9	0.36
11	8	30	81	16:58	1.6	0.26
12	8	30	81	15:18	0.6	0.23
13	8	30	81	14:36	7.1	0.35
3	8	31	81	17:39	0.8	0.03
5	8	31	81	17:50	1.2	0.03
7	8	31	81	17:15	1.5	0.07
8	8	31	81	16:59	1.6	0.59
9	8	31	81	16:26	1.4	0.08
10	8	31	81	18:07	0.3	0.04
12	8	31	81	17:01	1.6	0.22
13	8	31	81	17:08	1.3	0.05

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
1	9	7	81	11 :03	4.0	0.42
2	9	7	81	11 :06	5.9	0.38
3	9	7	81	11 :24	4.7	0.38
4	9	7	81	11 :24	3.6	0.35
5	9	7	81	10:56	4.3	0.43
6	9	7	81	11:14	3.9	0.41
7	9	7	81	11:18	4.6	0.38
8	9	7	81	11:32	4.8	0.36
9	9	7	81	10:55	5.1	0.36
10	9	7	81	11:10	4.6	0.34
11	9	7	81	11:10	4.5	0.33
12	9	7	81	11 :14	5.8	0.41
13	9	7	81	10:57	4.3	0.41
1	9	24	81	16:28	6.6	0.43
2	9	24	81	16:38	6.3	0.68
3	9	24	81	16:47	5.9	0.84
4	9	24	81	16:57	5.8	0.51
5	9	24	81	17:02	5.6	0.35
6	9	24	81	16:40	6.3	0.38
7	9	24	81	17:08	5.9	0.55
8	9	24	81	17:07	5.7	0.38
9	9	24	81	17:39	4.8	0.37
10	9	24	81	17:01	5.7	0.40
11	9	24	81	16:58	5.7	0.30
12	9	24	81	17:07	5.5	0.12
13	9	24	81	17:42	10.4	0.34
1	9	25	81	10:32	9.5	0.50
2	9	25	81	10:43	9.5	0.46
3	9	25	81	10:36	8.2	0.50
4	9	25	82	10:39	8.9	0.50
5	9	25	81	10:34	8.0	0.41
6	9	25	81	10:39	8.2	0.54
7	9	25	81	10:35	8.1	0.47
8	9	25	81	10:41	9.6	0.50
9	9	25	81	10:27	7.5	0.43
9	9	25	81	00:01	7.3	0.38
10	9	25	81	10:34	7.4	0.44
11	9	25	81	10:37	7.4	0.43
12	9	25	81	10:37	9.7	0.61
13	9	25	81	10:29	8.1	0.41
1	9	26	81	01 :27	5.6	0.27
1	9	26	81	08:35	1.6	0.28
2	9	26	81	01 :29	5.7	0.24
2	9	26	81	08:44	1.6	0.19
3	9	26	81	01:33	5.5	0.27
3	9	26	81	08:29	1.4	0.15
4	9	26	81	01:30	5.7	0.22
4	9	26	81	08:30	0.9	0.13
5	9	26	81	01 :28	5.7	0.46
5	9	26	81	08:31	1.9	0.20
6	9	26	81	01 :40	5.6	0.32
6	9	26	81	08:27	1.6	0.13
7	9	26	81	01 :48	5.8	0.33
7	9	26	81	08:31	1.4	0.10
8	9	26	81	01:26	5.9	0.17
8	9	26	81	08:31	0.4	0.11
10	9	26	81	01 :21	6.0	0.23
10	9	26	81	08:26	0.4	0.15

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
11	9	26	81	01:18	1.0	0.09
11	9	26	81	08:29	4.9	0.15
12	9	26	81	01:34	5-0	0.18
13	9	26	81	01:36	5.5	0.46
13	9	26	81	08:43	1.2	0.14
1	9	29	81	05:20	1.7	0.31
2	9	29	81	05:22	1.5	0.29
3	9	29	81	05:25	1.4	0.32
4	9	29	81	05:26	2.1	0.27
5	9	29	81	04:15	2.8	0.11
6	9	29	81	05:39	1.4	0.16
7	9	29	81	05:36	2.7	0.17
8	9	29	81	05:28	2.7	0.22
9	9	29	81	06:11	0.5	0.07
10	9	29	81	05:33	1.1	0.08
11	9	29	81	05:34	2.7	0.18
13	9	29	81	06:05	0.8	0.06
1	10	14	81	00:01	16.1	0.68
2	10	14	81	00:01	16.3	0.72
3	10	14	81	00:01	14.2	0.52
4	10	14	81	00:01	14.3	0.55
5	10	14	81	00:01	17.0	0.72
6	10	14	81	00:01	18.3	0.67
7	10	14	81	00:01	13.3	0.55
8	10	14	81	00:01	13.9	0.52
9	10	14	81	00:01	16.5	0.66
10	10	14	81	00:01	16.5	0.67
11	10	14	81	00:01	14.0	0.54
12	10	14	81	00:01	14.1	0.56
13	10	14	81	00:01	15.9	0.75
1	10	17	81	10:36	8.5	0.76
2	10	17	81	17:29	1.5	0.75
3	10	17	81	11:14	7.9	0.96
4	10	17	81	11:25	7.8	0.69
5	10	17	81	11:08	8.0	0.74
6	10	17	81	11:15	7.8	0.69
7	10	17	81	18:23	0.9	0.42
8	10	17	81	18:29	0.9	0.47
9	10	17	81	10:54	8.2	0.60
10	10	17	81	11:02	8.0	0.58
11	10	17	81	18:26	0.9	0.63
12	10	17	81	18:37	0.8	0.42
13	10	17	81	10:59	8.2	0.66
1	11	2	81	00:30	1.1	0.03
1	11	2	81	02:14	3.8	0.35
2	11	2	81	00:23	1.0	0.04
2	11	2	81	02:17	3.9	0.48
3	11	2	81	00:24	0.8	0.05
3	11	2	81	02:15	3.8	0.47
4	11	2	81	00:34	1.0	0.05
4	11	2	81	02:04	4.0	0.39
5	11	2	81	00:19	0.4	0.02
5	11	2	81	01:51	4.6	0.37
5	11	2	81	16:11	0.5	0.03
6	11	2	81	00:10	0.9	0.06
6	11	2	81	02:06	3.8	0.42
7	11	2	81	00:25	1.0	0.02
7	11	2	81	02:10	4.0	0.55

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
8	11	2	81	00:09	1.0	0.04
8	11	2	81	02:01	3.9	0.52
9	11	2	81	01:22	4.6	0.32
9	11	2	81	15:55	0.3	0.05
10	11	2	81	00:17	0.7	0.04
10	11	2	81	01:46	3.9	0.31
10	11	2	81	16:10	0.5	0.02
11	11	2	81	00:09	1.1	0.04
11	11	2	81	02:00	3.7	0.46
12	11	2	81	00:15	1.2	0.06
12	11	2	81	02:12	3.9	0.55
13	11	2	81	00:57	5.5	0.32
13	11	2	81	16:11	0.5	0.04
1	11	15	81	21:14	3.8	0.28
2	11	15	81	21:18	3.7	0.35
3	11	15	81	21:30	3.8	0.32
4	11	15	81	21:51	3.3	0.30
5	11	15	81	21:32	3.5	0.29
6	11	15	81	21:17	3.6	0.30
7	11	15	81	21:38	3.9	0.39
8	11	15	81	21:39	4.1	0.36
9	11	15	81	20:34	3.9	0.39
10	11	15	81	21:45	3.9	0.39
11	11	15	81	21:42	3.7	0.34
12	11	15	81	21:55	4.0	0.46
13	11	15	81	21:21	3.7	0.32
1	11	30	81	12:42	6.6	0.57
1	11	30	81	22:53	4.8	0.08
2	11	30	81	12:43	7.0	0.58
2	11	30	81	22:40	4.9	0.11
3	11	30	81	14:08	5.8	0.47
3	11	30	81	22:27	4.9	0.09
4	11	30	81	14:47	5.0	0.35
4	11	30	81	22:15	1.2	0.06
5	11	30	81	12:29	7.0	0.59
5	11	30	81	22:45	0.5	0.03
6	11	30	81	14:21	4.2	0.40
6	11	30	81	22:12	4.8	0.08
7	11	30	81	14:39	4.5	0.31
7	11	30	81	22:46	4.8	0.09
8	11	30	81	14:29	4.7	0.37
8	11	30	81	22:31	1.1	0.05
9	11	30	81	14:31	4.4	0.43
9	11	30	81	22:41	4.7	0.08
10	11	30	81	14:26	5.2	0.46
10	11	30	81	22:42	4.6	0.07
11	11	30	81	14:18	5.2	0.40
11	11	30	81	22:24	3.7	0.07
12	11	30	81	14:27	4.3	0.36
12	11	30	81	22:31	4.2	0.06
13	11	30	81	13:57	5.5	0.47
13	11	30	81	21:24	5.4	0.08
2	12	16	81	17:39	3.4	0.17
3	12	16	81	17:38	2.7	0.11
4	12	16	81	17:25	1.9	0.11
5	12	16	81	17:26	1.7	0.08
6	12	16	81	17:33	1.6	0.07
7	12	16	81	17:30	3.5	0.16

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
8	12	16	81	17:32	2.4	0.17
9	12	16	81	16:44	3.9	0.18
10	12	16	81	17:14	3.9	0.17
11	12	16	81	17:03	3.2	0.16
12	12	16	81	17:19	4.7	0.20
13	12	16	81	17:05	2.8	0.13
1	12	28	81	00:53	5.4	0.13
2	12	28	81	02:45	3.2	0.18
3	12	28	81	00:06	6.5	0.17
4	12	28	81	02:02	4.1	0.15
5	12	28	81	00:55	5.9	0.17
6	12	28	81	02:08	3.9	0.13
7	12	28	81	01:56	3.9	0.16
8	12	28	81	01:33	4.5	0.16
9	12	28	81	00:30	5.5	0.22
10	12	28	81	00:40	5.2	0.21
11	12	28	81	00:43	5.5	0.20
12	12	28	81	00:47	5.5	0.20
13	12	28	81	00:01	5.7	0.21
1	12	31	81	13:24	0.5	0.05
2	12	31	81	13:19	0.6	0.05
3	12	31	81	12:50	1.2	0.06
4	12	31	81	13:17	0.5	0.05
5	12	31	81	12:56	0.9	0.06
6	12	31	81	13:08	0.6	0.04
7	12	31	81	12:26	1.4	0.06
8	12	31	81	12:30	1.0	0.05
9	12	31	81	12:12	1.8	0.08
10	12	31	81	12:16	1.5	0.08
11	12	31	81	12:20	1.2	0.08
12	12	31	81	12:56	1.6	0.06
13	12	31	81	12:44	1.1	0.07
1	1	2	82	13:50	9.9	0.31
2	1	2	82	13:39	9.1	0.32
3	1	2	82	13:39	12.2	0.35
4	1	2	82	13:46	11.1	0.35
5	1	2	82	13:31	9.4	0.31
6	1	2	82	13:15	8.8	0.27
7	1	2	82	13:45	9.6	0.31
8	1	2	82	13:38	8.8	0.34
9	1	2	82	13:51	7.3	0.24
10	1	2	8	: 3	7.7	0.28
11	1	2	82	13:34	8.0	0.33
12	1	2	82	13:42	8.4	0.34
13	1	2	82	13:46	10.0	0.34
1	1	3	82	18:56	10.4	0.40
2	1	3	82	18:59	10.6	0.46
3	1	3	82	18:5.5	10.9	0.36
4	1	3	82	18:48	6.1	0.33
5	1	3	82	18:41	8.9	0.30
6	1	3	82	18:12	7.1	0.30
7	1	3	82	18:51	10.8	0.42
8	1	3	82	18:44	11.0	0.42
9	1	3	82	18:44	11.6	0.57
10	1	3	82	18:47	11.1	0.50
11	1	3	82	18:51	10.6	0.44
12	1	3	82	18:57	10.8	0.43
13	1	3	82	19:10	10.7	0.47

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
1	1	12	82	17:49	11.0	0.15
2	1	12	82	17:49	11.0	0.15
3	1	12	82	17:49	11.1	0.15
4	1	12	82	17:42	11.1	0.16
5	1	12	82	17:57	11.0	0.14
6	1	12	82	18:08	10.3	0.14
7	1	12	82	18:08	10.3	0.13
8	1	12	82	18:19	9.6	0.13
9	1	12	82	17:56	11.1	0.15
10	1	12	82	17:57	10.4	0.15
11	1	12	82	17:58	9.6	0.14
12	1	12	82	18:08	9.6	0.13
13	1	12	82	17:51	10.9	0.21
1	1	22	82	10:10	1.0	0.04
1	1	22	82	17:14	2.4	0.09
2	1	22	82	08:50	3.3	0.08
2	1	22	82	17:03	2.3	0.08
3	1	22	82	09:41	2.8	0.05
3	1	22	82	17:00	2.1	0.10
4	1	22	82	08:51	3.0	0.09
4	1	22	82	17:14	2.2	0.14
5	1	22	82	08:24	2.3	0.04
5	1	22	82	16:47	1.8	0.08
6	1	22	82	16:03	2.5	0.10
7	1	22	82	16:50	2.0	0.09
8	1	22	82	08:33	2.7	0.06
8	1	22	82	16:04	3.0	0.11
9	1	22	82	08:44	2.0	0.04
9	1	22	82	16:51	2.0	0.07
10	1	22	82	08:57	2.6	0.05
10	1	22	82	16:30	2.6	0.09
11	1	22	82	08:50	3.3	0.06
11	1	22	82	16:05	3.1	0.11
12	1	22	82	08:41	3.0	0.06
12	1	22	82	16:04	3.0	0.11
13	1	22	82	09:05	1.8	0.04
13	1	22	82	16:56	2.1	0.07
1	1	24	82	20:24	2.4	0.12
2	1	24	82	20:02	7.0	0.14
3	1	24	82	20:49	5.4	0.10
4	1	24	82	20:39	5.5	0.13
5	1	24	82	20:18	5.1	0.11
6	1	24	82	19:31	1.9	0.10
7	1	24	82	20:38	5.5	0.13
8	1	24	82	20:15	5.3	0.15
9	1	24	82	20:53	5.1	0.15
10	1	24	82	20:53	5.1	0.15
11	1	24	82	20:54	4.7	0.12
12	1	24	82	20:34	5.0	0.13
13	1	24	82	20:52	5.5	0.17
1	1	29	82	12:07	12.9	0.64
2	1	29	82	21:29	2.9	0.42
3	1	29	82	20:43	7.7	0.66
4	1	29	82	19:58	5.1	0.64
5	1	29	82	14:52	10.3	0.67
6	1	29	82	19:31	5.2	0.65
7	1	29	82	19:39	5.9	0.70
8	1	29	82	13:10	12.5	0.74

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
9	1	29	82	11:49	13.4	0.81
10	1	29	82	11:53	12.9	0.78
11	1	29	82	11:56	13.7	0.85
12	1	29	82	14:28	11.1	0.82
13	1	29	82	11:58	13.3	0.76
1	2	5	82	00:01	9.3	0.08
2	2	5	82	00:01	11.8	0.17
3	2	5	82	00:01	10.9	0.10
4	2	5	82	00:01	9.5	0.14
5	2	5	82	00:01	8.2	0.11
6	2	5	82	00:01	9.8	0.06
7	2	5	82	00:01	10.5	0.20
8	2	5	82	00:01	10.5	0.21
9	2	5	82	00:01	11.1	0.20
10	2	5	82	00:01	10.6	0.20
11	2	5	82	00:01	10.1	0.19
12	2	5	82	00:01	10.6	0.23
13	2	5	82	00:01	10.3	0.16
1	2	16	82	13:16	0.8	0.06
2	2	16	82	13:42	6.8	0.08
3	2	16	82	13:34	9.7	0.13
4	2	16	82	19:20	2.9	0.09
5	2	16	82	12:37	8.4	0.11
6	2	16	82	16:05	6.0	0.10
7	2	16	82	19:11	3.8	0.08
8	2	16	82	17:21	6.4	0.13
9	2	16	82	15:32	6.0	0.09
10	2	16	82	17:37	5.0	0.10
11	2	16	82	16:54	6.2	0.05
12	2	16	82	12:16	16.9	0.28
13	2	16	82	12:52	7.3	0.08
1	2	18	82	08:05	4.9	0.20
2	2	18	82	08:15	5.2	0.22
3	2	18	82	07:24	6.0	0.21
4	2	18	82	07:24	5.4	0.23
5	2	18	82	07:40	5.1	0.22
6	2	18	82	07:52	5.2	0.22
7	2	18	82	08:04	5.4	0.23
8	2	18	82	07:59	5.9	0.23
9	2	18	82	07:18	6.4	0.23
10	2	18	82	07:24	7.1	0.28
11	2	18	82	07:24	7.1	0.30
12	2	18	82	07:42	6.5	0.27
13	2	18	82	07:12	5.6	0.18
3	3	2	82	09:17	6.8	0.21
4	3	2	82	10:06	8.5	0.23
5	3	2	82	10:16	7.3	0.17
6	3	2	82	09:47	8.0	0.16
7	3	2	82	10:29	9.6	0.18
8	3	2	82	10:13	7.4	0.22
9	3	2	82	10:22	9.0	0.30
10	3	2	82	10:29	9.5	0.27
11	3	2	82	10:12	7.4	0.22
12	3	2	82	10:12	9.8	0.30
13	3	2	82	10:12	7.8	0.19
1	3	3	82	19:18	8.5	0.46
2	3	3	82	19:40	9.8	0.59
3	3	3	82	19:17	9.3	0.55

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUN1 INCHES
4	3	3	82	20:57	6.9	0.38
5	3	3	82	19:24	9.1	0.48
6	3	3	82	19:25	7.1	0.43
7	3	3	82	19:26	5.1	0.38
8	3	3	82	19:27	5.3	0.44
9	3	3	82	19:10	5.9	0.45
10	3	3	82	19:05	5.7	0.48
11	3	3	82	19:07	5.4	0.45
12	3	3	82	19:33	5.5	0.54
13	3	3	82	19:15	6.2	0.50
2	3	4	82	07:51	1.3	0.04
3	3	4	82	07:15	1.5	0.05
7	3	4	82	02:46	2.0	0.12
7	3	4	82	07:50	0.9	0.04
8	3	4	82	02:47	3.0	0.12
8	3	4	82	07:56	0.9	0.04
9	3	4	82	02:29	3.3	0.15
9	3	4	82	07:28	0.7	0.02
10	3	4	82	02:33	2.9	0.15
10	3	4	82	07:14	1.8	0.06
11	3	4	82	02:40	3.0	0.14
11	3	4	82	07:24	1.5	0.05
12	3	4	82	02:55	3.0	0.14
12	3	4	82	08:06	1.5	0.04
13	3	4	82	02:39	2.8	0.14
13	3	4	82	08:00	0.6	0.04
1	3	8	82	12:18	1.0	0.07
3	3	8	82	11:15	0.7	0.05
8	3	8	82	12:34	1.2	0.04
11	3	8	82	10:59	2.1	0.12
12	3	8	82	11:31	2.0	0.14
13	3	8	82	10:53	2.3	0.09
1	3	9	82	21:08	1.0	0.06
2	3	9	82	19:59	1.8	0.07
3	3	9	82	18:41	2.7	0.09
4	3	9	82	21:14	1.2	0.08
5	3	9	82	21:14	1.0	0.05
6	3	9	82	21:28	0.9	0.05
7	3	9	82	21:42	0.8	0.04
8	3	9	82	21:29	1.5	0.06
9	3	9	82	21:29	1.0	0.04
10	3	9	82	21:31	1.1	0.05
11	3	9	82	21:34	1.2	0.07
12	3	9	82	21:57	1.0	0.06
13	3	9	82	20:06	7.6	0.16
1	3	10	82	07:51	0.6	0.06
2	3	10	82	07:45	0.7	0.06
3	3	10	82	07:45	0.8	0.06
4	3	10	82	07:39	1.0	0.09
5	3	10	82	07:56	0.6	0.08
6	3	10	82	07:54	0.7	0.08
7	3	10	82	07:52	0.9	0.07
8	3	10	82	07:41	1.1	0.07
9	3	10	82	07:33	1.0	0.05
10	3	10	82	07:58	0.9	0.05
11	3	10	82	08:13	0.8	0.05
12	3	10	82	07:54	0.9	0.05
13	3	10	82	08:14	0.7	0.04

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
14	3	10	82	07:01	2.4	0.03
1	3	12	82	18:37	2.0	0.39
2	3	12	82	18:51	1.1	0.40
3	3	12	82	18:35	0.9	0.37
4	3	12	82	18:43	1.0	0.37
5	3	12	82	18:49	1.0	0.39
6	3	12	82	19:12	0.7	0.20
7	3	12	82	18:53	2.0	0.26
8	3	12	82	18:27	1.7	0.25
9	3	12	82	18:46	1.7	0.29
10	3	12	82	18:59	2.0	0.25
11	3	12	82	18:59	1.5	0.17
12	3	12	82	18:59	1.0	0.17
13	3	12	82	18:59	1.1	0.36
1	3	14	82	20:04	1.3	0.11
2	3	14	82	20:12	1.4	0.11
3	3	14	82	19:31	1.3	0.13
4	3	14	82	19:51	1.3	0.12
5	3	14	82	20:04	1.7	0.16
6	3	14	82	20:53	0.7	0.04
7	3	14	82	20:24	1.5	0.14
8	3	14	82	20:44	1.4	0.07
9	3	14	82	19:55	1.6	0.12
10	3	14	82	19:55	1.4	0.15
11	3	14	82	19:54	1.2	0.19
12	3	14	82	19:56	1.4	0.20
13	3	14	82	20:19	1.8	0.15
1	3	16	82	00:01	2.5	0.77
2	3	16	82	00:01	2.8	0.97
3	3	16	82	00:01	2.3	1.04
4	3	16	82	00:01	2.5	1.01
5	3	16	82	00:01	2.4	0.85
6	3	16	82	00:01	2.1	0.96
7	3	16	82	00:01	2.7	0.79
8	3	16	82	00:01	2.1	0.66
9	3	16	82	00:01	2.8	0.92
10	3	16	82	00:01	2.8	0.87
11	3	16	82	00:01	2.2	0.73
12	3	16	82	00:01	2.8	0.89
13	3	16	82	00:01	2.5	0.88
1	3	19	82	04:37	14.8	1.71
1	3	19	82	21:23	0.4	0.19
2	3	19	82	04:36	14.0	1.63
2	3	19	82	21:14	0.6	0.16
3	3	19	82	04:41	10.8	1.46
3	3	19	82	17:28	4.0	0.20
4	3	19	82	05:54	12.6	1.59
4	3	19	82	21:18	0.7	0.23
5	3	19	82	02:55	11.7	1.30
5	3	19	82	21:03	0.6	0.23
6	3	19	82	03:03	11.8	1.20
6	3	19	82	21:17	0.8	0.16
7	3	19	82	03:21	11.8	1.09
7	3	19	82	21:38	1.0	0.09
8	3	19	82	04:00	14.3	1.27
8	3	19	82	21:28	0.7	0.20
9	3	19	82	03:44	12.7	1.36
9	3	19	82	21:27	0.3	0.10

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
10	3	19	82	03:37	12.6	1.33
10	3	19	82	21:27	0.4	0.13
11	3	19	82	04:02	15.0	1.27
11	3	19	82	21:17	1.0	0.24
12	3	19	82	03:15	12.8	1.35
12	3	19	82	21:30	1.0	0.16
13	3	19	82	01:56	12.6	1.29
13	3	19	82	16:28	5.3	0.25
1	3	24	82	00:01	2.0	0.15
2	3	24	82	00:01	2.3	0.16
3	3	24	82	00:01	2.6	0.17
4	3	24	82	00:01	2.4	0.13
5	3	24	82	00:01	2.5	0.17
6	3	24	82	00:01	2.5	0.17
8	3	24	82	00:01	2.5	0.10
9	3	24	82	00:01	3.0	0.13
10	3	24	82	00:01	2.7	0.15
11	3	24	82	00:01	2.8	0.13
12	3	24	82	00:01	2.4	0.09
1	3	30	82	04:44	1.0	0.10
1	3	30	82	08:36	1.5	0.34
2	3	30	82	03:12	2.8	0.10
2	3	30	82	08:21	2.0	0.34
3	3	30	82	04:57	0.8	0.08
3	3	30	82	08:22	1.7	0.42
4	3	30	82	04:04	1.3	0.09
4	3	30	82	08:22	1.9	0.38
5	3	30	82	04:53	1.2	0.11
5	3	30	82	08:41	1.4	0.31
6	3	30	82	02:58	2.4	0.07
6	3	30	82	08:52	1.2	0.26
7	3	30	82	05:07	0.8	0.08
7	3	30	82	08:56	1.3	0.34
8	3	30	82	02:15	3.7	0.12
8	3	30	82	08:44	1.2	0.37
9	3	30	82	04:40	1.2	0.08
9	3	30	82	08:18	1.6	0.33
10	3	30	82	04:49	0.7	0.07
10	3	30	82	08:36	1.2	0.34
11	3	30	82	04:56	0.9	0.10
11	3	30	82	08:52	1.3	0.34
12	3	30	82	03:36	2.3	0.11
12	3	30	82	08:57	1.4	0.44
13	3	30	82	05:11	0.9	0.08
13	3	30	82	08:46	1.3	0.34
1	4	2	82	07:29	2.8	0.90
1	4	2	82	14:31	0.7	0.13
2	4	2	82	07:36	3.0	0.73
2	4	2	82	14:35	0.6	0.19
2	4	2	82	16:58	10.6	0.34
3	4	2	82	08:03	2.9	0.75
3	4	2	82	14:49	1.3	0.25
3	4	2	82	17:25	10.3	0.39
4	4	2	82	07:51	3.2	0.82
4	4	2	82	13:57	1.9	0.27
4	4	2	82	18:05	10.9	0.40
5	4	2	82	07:34	2.7	0.87
5	4	2	82	13:54	1.4	0.14

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
5	4	2	82	16:36	11.3	0.30
6	4	2	82	08:16	2.0	0.47
6	4	2	82	14:27	0.5	0.22
6	4	2	82	16:48	9.3	0.39
7	4	2	82	07:22	3.2	0.60
7	4	2	82	14:16	1.6	0.23
7	4	2	82	19:57	9.6	0.38
8	4	2	82	07:01	3.9	0.88
8	4	2	82	13:53	1.6	0.24
8	4	2	82	19:52	9.1	0.44
9	4	2	82	07:27	3.0	0.69
9	4	2	82	14:30	0.6	0.27
9	4	2	82	16:58	12.1	0.47
10	4	2	82	07:19	3.0	0.75
10	4	2	82	14:33	1.0	0.38
10	4	2	82	16:54	12.3	0.43
11	4	2	82	07:08	3.8	0.63
11	4	2	82	13:59	1.9	0.28
11	4	2	82	19:57	9.1	0.41
12	4	2	82	06:56	3.8	0.72
12	4	2	82	13:52	1.7	0.22
12	4	2	82	19:59	10.0	0.43
13	4	2	82	07:34	2.7	0.89
13	4	2	82	14:19	1.0	0.15
13	4	2	82	16:58	12.0	0.41
1	4	5	82	08:46	8.6	0.19
2	4	5	82	09:16	8.6	0.63
3	4	5	82	09:42	6.1	0.37
4	4	5	82	10:10	8.4	0.55
5	4	5	82	09:13	6.8	0.21
6	4	5	82	09:14	7.7	0.16
7	4	5	82	09:15	9.5	0.29
8	4	5	82	09:14	7.3	0.38
9	4	5	82	09:30	8.6	0.43
10	4	5	82	09:10	12.0	0.40
11	4	5	82	09:29	7.1	0.38
12	4	5	82	09:22	7.2	0.38
13	4	5	82	09:27	12.5	0.33
1	4	7	82	11:18	8.9	0.09
2	4	7	82	15:18	9.7	0.18
3	4	7	82	15:59	7.5	0.10
4	4	7	82	14:28	10.8	0.21
5	4	7	82	12:30	11.0	0.05
6	4	7	82	12:44	10.3	0.07
7	4	7	82	12:58	9.6	0.08
8	4	7	82	13:29	8.3	0.08
9	4	7	82	15:46	7.8	0.08
10	4	7	82	15:32	7.8	0.08
11	4	7	82	14:45	8.2	0.11
12	4	7	82	14:07	8.3	0.10
13	4	7	82	15:41	11.1	0.16
1	4	8	82	13:30	10.4	0.13
2	4	8	82	06:56	17.3	0.32
3	4	8	82	09:28	12.9	0.19
5	4	8	82	06:59	15.1	0.11
8	4	8	82	12:59	9.0	0.12
9	4	8	82	07:50	13.8	0.18
10	4	8	82	07:01	14.8	0.15

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
11	4	8	82	06:54	16.9	0.18
12	4	8	82	09:57	13.0	0.15
13	4	8	82	06:59	16.8	0.21
8	4	9	82	12:39	0.5	0.05
9	4	9	82	07:41	0.6	0.04
11	4	9	82	07:55	4.1	0.04
12	4	9	82	10:27	2.3	0.05
1	4	15	82	16:23	1.8	0.63
2	4	15	82	16:23	1.9	0.45
3	4	15	82	16:27	1.9	0.52
4	4	15	82	16:33	1.7	0.51
5	4	15	82	15:51	2.4	0.60
6	4	15	82	16:11	2.2	0.55
7	4	15	82	16:30	2.0	0.50
8	4	15	82	16:31	1.7	0.53
9	4	15	82	16:06	2.0	0.29
10	4	15	82	16:13	1.9	0.41
11	4	15	82	16:21	2.3	0.53
12	4	15	82	16:24	2.0	0.63
13	4	15	82	15:50	2.6	0.61
1	4	16	82	06:02	14.4	1.20
2	4	16	82	07:31	13.1	1.31
3	4	16	82	06:50	0.2	0.09
3	4	16	82	07:33	12.9	2.03
4	4	16	82	07:05	14.0	1.78
5	4	16	82	07:49	12.7	1.20
6	4	16	82	07:44	13.1	1.51
7	4	16	82	07:39	13.4	1.81
8	4	16	82	00:58	0.2	0.04
8	4	16	82	07:20	13.3	1.51
9	4	16	82	07:12	13.3	1.83
10	4	16	82	06:44	0.2	0.04
10	4	16	82	07:27	13.2	1.65
11	4	16	82	07:33	13.1	2.14
12	4	16	82	00:59	0.4	0.03
12	4	16	82	07:50	4.6	0.95
12	4	16	82	11:49	8.9	0.90
13	4	16	82	05:55	0.5	0.06
13	4	16	82	07:49	12.8	1.19
1	5	5	82	20:18	1.1	0.07
2	5	5	82	19:13	2.3	0.13
3	5	5	82	20:27	6.0	0.09
4	5	5	82	15:41	0.6	0.05
5	5	5	82	19:12	9.2	0.14
6	5	5	82	21:10	7.3	0.09
7	5	5	82	20:25	1.4	0.08
8	5	5	82	19:47	2.2	0.06
9	5	5	82	19:35	1.9	0.11
10	5	5	82	20:02	6.5	0.10
11	5	5	82	20:27	1.9	0.10
12	5	5	82	19:46	3.2	0.13
13	5	5	82	19:42	8.9	0.16
1	5	6	82	14:54	1.4	0.08
2	5	6	82	13:34	2.4	0.15
3	5	6	82	15:11	1.0	0.11
4	5	6	82	12:08	0.7	0.06
5	5	6	82	13:55	2.1	0.15
6	5	6	82	15:09	1.1	0.09

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
7	5	6	82	13:33	2.8	0.11
8	5	6	82	15:26	0.9	0.11
9	5	6	82	11:55	4.0	0.11
10	5	6	82	13:08	3.0	0.10
11	5	6	82	15:16	0.9	0.09
12	5	6	82	13:53	2.7	0.16
13	5	6	82	13:07	3.6	0.14
1	5	15	82	20:08	0.6	0.18
2	5	15	82	18:54	1.8	0.15
3	5	15	82	20:24	0.6	0.19
4	5	15	82	20:45	0.3	0.05
5	5	15	82	20:15	0.5	0.09
6	5	15	82	19:52	1.3	0.07
7	5	15	82	19:29	2.0	0.04
8	5	15	82	19:02	0.5	0.11
9	5	15	82	18:52	1.9	0.13
10	5	15	82	18:52	1.1	0.03
12	5	15	82	18:56	0.5	0.23
13	5	15	82	20:06	0.6	0.14
1	5	16	82	06:52	0.8	0.12
1	5	16	82	18:36	0.5	0.20
1	5	16	82	22:33	0.9	0.09
2	5	16	82	06:53	0.9	0.21
2	5	16	82	18:42	3.0	0.17
2	5	16	82	22:36	0.9	0.06
3	5	16	82	06:49	1.0	0.21
3	5	16	82	18:31	4.5	0.29
4	5	16	82	06:40	1.9	0.14
4	5	16	82	18:47	4.3	0.45
5	5	16	82	06:55	0.9	0.10
5	5	16	82	18:34	0.4	0.25
5	5	16	82	22:19	0.8	0.07
6	5	16	82	06:48	1.0	0.10
6	5	16	82	18:29	2.8	0.33
7	5	16	82	06:42	1.0	0.10
7	5	16	82	18:24	5.1	0.40
8	5	16	82	06:43	0.8	0.11
8	5	16	82	18:19	4.8	0.64
9	5	16	82	06:46	1.7	0.14
9	5	16	82	18:21	0.8	0.20
9	5	16	82	21:30	1.8	0.14
10	5	16	82	06:43	1.1	0.18
10	5	16	82	18:17	5.1	0.45
11	5	16	82	06:47	0.8	0.17
11	5	16	82	18:13	0.9	0.64
11	5	16	82	20:21	3.0	0.20
12	5	16	82	06:56	1.4	0.22
12	5	16	82	18:41	0.5	0.57
12	5	16	82	19:53	3.4	0.34
13	5	16	82	06:55	1.5	0.10
13	5	16	82	18:37	0.4	0.19
13	5	16	82	21:24	3.5	0.14
1	5	17	82	00:31	0.4	0.06
1	5	17	82	04:17	0.9	0.09
2	5	17	82	00:36	0.5	0.06
2	5	17	82	04:28	0.7	0.07
3	5	17	82	00:40	0.7	0.05
3	5	17	82	03:42	1.3	0.06

RAIN.. GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
4	5	17	82	00:53	0.6	0.06
4	5	17	82	04:32	0.4	0.04
5	5	17	82	00:29	0.3	0.04
5	5	17	82	04:23	0.5	0.10
6	5	17	82	00:37	0.5	0.15
6	5	17	82	04:11	1.0	0.09
7	5	17	82	00:44	0.6	0.05
7	5	17	82	03:58	1.5	0.07
8	5	17	82	00:37	0.6	0.07
8	5	17	82	04:00	1.8	0.04
9	5	17	82	00:31	0.7	0.11
9	5	17	82	04:18	1.7	0.19
10	5	17	82	00:32	0.8	0.14
10	5	17	82	04:13	1.8	0.10
11	5	17	82	00:39	0.7	0.07
11	5	17	82	04:02	0.8	0.08
12	5	17	82	00:42	0.6	0.07
12	5	17	82	04:00	0.8	0.06
13	5	17	82	04:14	0.8	0.15
1	5	18	82	17:39	0.9	0.17
2	5	18	82	17:42	0.5	0.07
3	5	18	82	17:33	0.7	0.22
4	5	18	82	17:48	1.7	0.42
5	5	18	82	17:46	0.7	0.07
6	5	18	82	17:41	1.0	0.18
7	5	18	82	17:36	1.3	0.29
8	5	18	82	18:08	1.0	0.18
9	5	18	82	18:06	1.2	0.03
10	5	18	82	17:34	1.5	0.22
11	5	18	82	18:07	1.1	0.14
12	5	18	82	18:39	0.7	0.06
13	5	18	82	18:03	5.6	0.10
1	5	20	82	16:23	6.3	0.51
2	5	20	82	16:23	6.8	0.47
3	5	20	82	16:27	6.8	0.45
4	5	20	82	16:31	6.8	0.43
5	5	20	82	16:18	6.3	0.65
6	5	20	82	16:23	6.3	0.62
7	5	20	82	16:20	7.0	0.55
8	5	20	82	16:16	6.5	0.56
9	5	20	82	16:04	7.2	0.47
10	5	20	82	15:58	7.2	0.84
11	5	20	82	18:49	4.5	0.57
12	5	20	82	18:48	9.7	0.66
13	5	20	82	22:05	1.6	0.07
1	5	21	82	18:57	0.8	1.33
2	5	21	82	19:04	0.8	1.40
3	5	21	82	18:53	1.0	1.69
4	5	21	82	19:06	1.2	1.18
5	5	21	82	19:02	0.8	0.75
6	5	21	82	18:57	1.0	0.53
7	5	21	82	18:49	1.6	0.34
8	5	21	82	19:14	0.8	0.45
9	5	21	82	19:03	0.6	0.09
10	5	21	82	18:54	0.9	0.24
11	5	21	82	03:38	1.9	0.07
11	5	21	82	19:15	0.7	0.40
12	5	21	82	19:30	0.6	0.15

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
13	5	21	82	18:59	0.9	0.70
1	5	26	82	05:18	2.1	0.40
1	5	26	82	15:26	0.4	0.15
1	5	26	82	17:31	0.7	0.26
2	5	26	82	04:24	2.9	0.19
2	5	26	82	07:49	1.2	0.02
2	5	26	82	15:32	0.5	0.21
2	5	26	82	17:43	0.3	0.28
2	5	26	82	19:56	9.8	0.13
3	5	26	82	05:15	1.9	0.28
3	5	26	82	07:58	1.1	0.05
3	5	26	82	15:35	0.6	0.09
3	5	26	82	17:46	0.4	0.22
4	5	26	82	05:33	1.7	0.28
4	5	26	82	08:08	1.0	0.05
4	5	26	82	15:31	0.8	0.12
4	5	26	82	17:47	0.8	0.10
5	5	26	82	04:37	2.5	0.24
5	5	26	82	07:42	0.8	0.03
5	5	26	82	15:19	0.4	0.20
5	5	26	82	17:25	0.4	0.48
6	5	26	82	05:27	1.9	0.32
6	5	26	82	07:46	1.0	0.02
6	5	26	82	15:26	0.7	0.17
6	5	26	82	17:37	0.6	0.40
7	5	26	82	05:57	1.2	0.10
7	5	26	82	08:08	0.9	0.04
7	5	26	82	15:27	0.8	0.18
7	5	26	82	17:50	0.7	0.14
8	5	26	82	05:28	1.7	0.22
8	5	26	82	07:59	0.8	0.04
8	5	26	82	15:31	0.5	0.23
8	5	26	82	18:01	0.8	0.11
9	5	26	82	05:15	1.7	0.18
9	5	26	82	07:45	0.8	0.04
9	5	26	82	15:10	0.6	0.36
9	5	26	82	17:30	0.5	0.36
10	5	26	82	04:52	2.2	0.48
10	5	26	82	07:40	1.0	0.04
10	5	26	82	15:21	0.5	0.47
10	5	26	82	17:34	0.7	0.34
11	5	26	82	05:10	1.9	0.32
11	5	26	82	07:45	0.8	0.04
11	5	26	82	15:21	0.6	0.32
11	5	26	82	17:38	1.0	0.27
12	5	26	82	05:23	1.6	0.15
12	5	26	82	07:50	0.6	0.04
12	5	26	82	15:14	0.6	0.60
12	5	26	82	18:06	2.9	0.21
13	5	26	82	05:32	1.7	0.22
13	5	26	82	07:51	1.0	0.02
13	5	26	82	15:15	0.6	0.26
13	5	26	82	17:34	0.6	0.39
13	5	26	82	22:05	6.9	0.15
1	5	27	82	04:00	1.0	0.13
1	5	27	82	09:15	2.0	0.04
1	5	27	82	16:15	0.5	0.07
2	5	27	82	08:52	2.6	0.05

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
2	5	27	82	16:13	0.8	0.26
3	5	27	82	00:01	7.8	0.13
3	5	27	82	16:13	0.6	0.34
4	5	27	82	04:16	0.6	0.05
4	5	27	82	16:23	0.7	0.20
5	5	27	82	03:03	1.9	0.15
5	5	27	82	09:07	0.4	0.03
5	5	27	82	16:12	2.5	0.24
6	5	27	82	04:05	1.1	0.10
6	5	27	82	16:23	1.4	0.11
7	5	27	82	04:11	1.1	0.11
7	5	27	82	16:37	1.0	0.05
8	5	27	82	04:30	0.4	0.05
8	5	27	82	16:23	0.9	0.08
9	5	27	82	03:49	1.8	0.15
9	5	27	82	15:39	1.9	0.56
10	5	27	82	03:16	2.3	0.12
10	5	27	82	15:59	1.6	0.26
11	5	27	82	03:14	1.6	0.08
11	5	27	82	16:10	1.6	0.18
12	5	27	82	03:59	0.8	0.06
12	5	27	82	16:53	0.7	0.10
13	5	27	82	08:44	0.7	0.05
13	5	27	82	16:16	1.2	0.19
1	5	29	82	11:28	5.9	0.62
2	5	29	82	11:24	3.2	0.77
3	5	29	82	11:31	4.5	1.00
4	5	29	82	11:29	4.6	0.93
5	5	29	82	03:42	1.0	0.06
5	5	29	82	11:28	3.5	0.36
6	5	29	82	04:10	0.3	0.03
6	5	29	82	11:28	2.6	0.39
7	5	29	82	13:36	2.7	0.27
8	5	29	82	11:40	4.6	0.26
9	5	29	82	03:51	0.4	0.08
9	5	29	82	11:12	2.5	0.36
10	5	29	82	11:20	5.8	0.44
11	5	29	82	11:18	2.7	0.25
12	5	29	82	05:13	0.6	0.05
12	5	29	82	11:35	6.4	0.21
13	5	29	82	11:25	2.4	0.25
1	5	31	82	12:44	5.3	0.14
2	5	31	82	13:28	4.5	0.14
3	5	31	82	13:12	5.4	0.23
4	5	31	82	13:39	5.6	0.15
5	5	31	82	13:32	4.8	0.14
6	5	31	82	13:46	5.1	0.15
7	5	31	82	13:30	5.6	0.16
8	5	31	82	12:51	5.8	0.18
9	5	31	82	13:23	4.9	0.18
10	5	31	82	13:18	5.3	0.16
11	5	31	82	13:30	4.9	0.17
12	5	31	82	14:11	4.8	0.14
13	5	31	82	13:15	5.8	0.15
1	6	2	82	16:03	8.0	0.67
2	6	2	82	18:47	3.1	0.40
3	6	2	82	18:28	3.6	0.66
4	6	2	82	18:02	5.5	0.59

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
5	6	2	82	16:44	5.4	0.31
6	6	2	82	18:45	6.5	0.34
7	6	2	82	18:44	3.4	0.43
8	6	2	82	17:39	7.4	0.52
9	6	2	82	19:18	1.9	0.19
10	6	2	82	19:09	2.5	0.21
11	6	2	82	18:59	3.0	0.23
12	6	2	82	16:51	5.1	0.58
13	6	2	82	19:07	3.9	0.30
2	6	8	82	17:57	6.3	0.19
3	6	8	82	17:52	5.8	0.22
4	6	8	82	17:45	6.2	0.20
5	6	8	82	17:32	7.7	0.24
7	6	8	82	20:17	4.5	0.11
8	6	8	82	17:37	6.5	0.19
9	6	8	82	19:49	3.9	0.21
10	6	8	82	18:41	5.8	0.22
11	6	8	82	17:32	7.6	0.23
12	6	8	82	20:17	2.1	0.17
13	6	8	82	20:03	5.1	0.27
1	6	12	82	20:47	0.7	0.07
2	6	12	82	20:56	1.0	0.01
3	6	12	82	20:36	1.0	0.17
1	6	14	82	21:59	0.7	0.16
2	6	14	82	22:03	5.4	0.16
3	6	14	82	21:44	0.8	0.19
5	6	14	82	21:55	0.7	0.23
6	6	14	82	22:04	1.8	0.18
7	6	14	82	22:03	5.8	0.19
8	6	14	82	22:10	0.9	0.18
9	6	14	82	21:53	0.4	0.18
10	6	14	82	21:57	1.0	0.20
11	6	14	82	22:00	1.5	0.21
12	6	14	82	22:16	5.6	0.20
13	6	14	82	22:09	4.9	0.22
1	6	15	82	03:00	0.2	0.04
1	6	15	82	13:27	5.3	0.23
2	6	15	82	13:24	7.5	0.20
3	6	15	82	13:24	5.2	0.45
4	6	15	82	16:54	2.6	0.32
5	6	15	82	13:10	5.6	0.18
6	6	15	82	13:31	5.0	0.21
7	6	15	82	13:23	6.6	0.49
8	6	15	82	13:29	6.3	0.44
9	6	15	82	13:22	9.7	0.33
10	6	15	82	13:19	8.0	0.45
11	6	15	82	13:16	6.3	0.54
12	6	15	82	13:26	5.6	0.69
13	6	15	82	13:20	9.1	0.21
1	6	18	82	02:42	3.3	0.25
1	6	18	82	10:31	9.5	0.36
2	6	18	82	02:57	3.1	0.26
2	6	18	82	10:21	7.0	0.32
2	6	18	82	19:24	0.5	0.03
3	6	18	82	02:25	3.9	0.36
3	6	18	82	10:37	9.5	0.48
4	6	18	82	05:10	0.6	0.11
4	6	18	82	10:43	9.4	0.29

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
5	6	18	82	03:09	2.8	0.30
5	6	18	82	09:26	10.9	0.84
6	6	18	82	03:41	2.2	0.27
6	6	18	82	10:14	10.3	0.73
7	6	18	82	03:21	2.4	0.28
7	6	18	82	14:58	5.3	0.57
8	6	18	82	03:20	2.3	0.26
8	6	18	82	10:04	10.2	0.61
9	6	18	82	03:15	2.7	0.29
9	6	18	82	09:14	11.3	0.69
10	6	18	82	03:26	2.8	0.24
10	6	18	82	09:21	11.7	0.58
11	6	18	82	03:23	2.8	0.26
11	6	18	82	09:32	10.8	0.59
12	6	18	82	03:54	2.4	0.21
12	6	18	82	09:40	8.9	0.64
13	6	18	82	03:16	2.7	0.30
13	6	18	82	09:26	11.1	0.73
1	6	21	82	23:23	0.8	0.08
2	6	21	82	23:24	1.1	0.06
3	6	21	82	23:00	1.3	0.10
4	6	21	82	22:42	1.0	0.07
5	6	21	82	23:17	0.5	0.02
6	6	21	82	23:31	0.3	0.02
7	6	21	82	23:10	0.8	0.05
8	6	21	82	23:04	1.3	0.05
9	6	21	82	23:18	0.4	0.05
10	6	21	82	23:04	1.2	0.04
11	6	21	82	23:13	1.4	0.07
12	6	21	82	23:23	1.3	0.09
13	6	21	82	23:25	1.3	0.03
1	6	25	82	16:03	0.6	0.07
3	6	25	82	20:47	1.0	0.05
6	6	25	82	16:08	0.4	0.11
8	6	25	82	21:26	0.7	0.05
11	6	25	82	16:54	2.6	0.16
1	6	27	82	14:54	0.7	0.05
2	6	27	82	14:57	2.1	0.71
3	6	27	82	14:41	3.0	0.74
4	6	27	82	17:08	1.1	0.11
5	6	27	82	15:55	0.6	0.19
6	6	27	82	14:51	0.5	0.34
7	6	27	82	14:54	0.7	0.16
8	6	27	82	16:45	0.5	0.43
11	6	27	82	14:28	1.0	0.08
12	6	27	82	11:43	0.4	0.06
1	6	28	82	09:42	2.0	0.23
2	6	28	82	09:09	3.2	0.63
3	6	28	82	09:38	2.9	1.02
4	6	28	82	09:23	3.1	0.62
5	6	28	82	10:03	1.5	0.09
6	6	28	82	09:35	2.9	0.86
7	6	28	82	09:26	3.3	0.60
8	6	28	82	09:47	2.8	0.36
10	6	28	82	10:13	1.6	0.16
11	6	28	82	09:24	2.4	0.26
12	6	28	82	12:31	0.5	0.04
1	7	2	82	07:58	1.0	0.10

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
1	7	2	82	11:34	1.0	0.03
1	7	2	82	17:22	11.8	1.74
2	7	2	82	08:11	4.7	0.11
2	7	2	82	18:18	10.7	1.86
3	7	2	82	08:20	4.9	0.16
3	7	2	82	17:32	11.4	1.95
4	7	2	82	18:31	8.2	1.00
5	7	2	82	07:34	4.4	0.16
5	7	2	82	18:15	10.8	0.97
6	7	2	82	07:52	4.4	0.17
6	7	2	82	18:28	10.5	1.48
7	7	2	82	07:35	4.6	0.20
7	7	2	82	18:39	9.4	1.67
8	7	2	82	07:38	5.4	0.12
8	7	2	82	18:36	8.1	1.58
9	7	2	82	07:17	4.5	0.17
9	7	2	82	18:12	10.2	1.41
10	7	2	82	07:21	4.4	0.15
10	7	2	82	18:14	8.6	1.17
11	7	2	82	07:45	4.5	0.13
11	7	2	82	18:21	8.7	1.00
12	7	2	82	07:45	4.5	0.17
12	7	2	82	18:31	8.2	1.12
13	7	2	82	07:10	4.8	0.24
13	7	2	82	17:54	11.0	0.82
1	7	3	82	19:56	1.6	0.29
2	7	3	82	19:52	1.1	0.17
4	7	3	82	19:49	0.5	0.13
5	7	3	82	19:59	1.6	0.37
6	7	3	82	20:01	1.5	0.22
7	7	3	82	20:05	1.4	0.13
8	7	3	82	20:08	1.3	0.09
9	7	3	82	20:04	1.5	0.69
10	7	3	82	20:03	1.6	0.36
11	7	3	82	20:07	1.4	0.17
12	7	3	82	20:06	1.3	0.08
13	7	3	82	20:11	3.4	0.70
1	7	6	82	17:06	7.9	6.48
2	7	6	82	17:18	10.9	6.57
3	7	6	82	17:23	7.0	5.30
4	7	6	82	17:58	8.3	4.26
5	7	6	82	17:55	10.9	5.61
6	7	6	82	18:22	10.0	4.88
7	7	6	82	18:55	9.5	3.22
8	7	6	82	18:33	9.5	2.81
9	7	6	82	18:45	8.3	3.34
10	7	6	82	18:52	9.1	3.20
11	7	6	82	19:35	5.7	2.79
12	7	6	82	15:30	11.2	2.91
13	7	6	82	17:50	7.1	5.27
1	7	15	82	03:55	0.9	0.45
2	7	15	82	03:51	1.6	0.29
4	7	15	82	04:50	0.3	0.05
5	7	15	82	03:49	1.0	0.30
7	7	15	82	04:28	0.9	0.07
13	7	15	82	03:40	0.9	0.22
1	7	18	82	01:42	9.1	2.40
2	7	18	82	01:42	9.1	2.40

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
3	7	18	82	01 :28	9.3	3.33
4	7	18	82	01 :45	8.9	2.84
5	7	18	82	01:55	8.9	2.54
6	7	18	82	01 :59	9.8	2.00
7	7	18	82	02:05	8.7	2.86
8	7	18	82	01 :52	8.7	2.71
9	7	18	82	02:04	10.0	2.69
10	7	18	82	01 :50	9.0	2.65
11	7	18	82	01 :45	9.4	3.19
12	7	18	82	02:00	9.1	3.10
13	7	18	82	01:53	9.0	2.62
1	7	19	82	22:45	2.5	1.50
2	7	19	82	22:45	2.5	1.50
3	7	19	82	00:01	2.0	1.74
4	7	19	82	00:01	2.4	0.71
5	7	19	82	00:01	2.9	1.15
6	7	19	82	00:01	1.4	0.98
7	7	19	82	00:01	1.7	1.41
8	7	19	82	00:01	2.3	1.97
9	7	19	82	00:01	1.6	0.79
10	7	19	82	00:01	1.7	1.22
11	7	19	82	00:01	1.3	1.41
12	7	19	82	00:01	1.2	1.02
13	7	19	82	00:01	2.5	1.19
1	7	21	82	06:48	3.4	0.17
1	7	21	82	20:27	0.7	0.30
2	7	21	82	06:48	3.4	0.17
2	7	21	82	20:25	0.8	0.28
3	7	21	82	07:06	3.3	0.17
3	7	21	82	20:17	0.7	0.21
4	7	21	82	07:24	0.5	0.33
4	7	21	82	20:28	0.8	0.33
5	7	21	82	06:30	3.5	0.18
5	7	21	82	20:18	0.5	0.26
6	7	21	82	07:10	2.6	0.14
6	7	21	82	12:23	0.4	0.13
6	7	21	82	20:27	0.5	0.57
7	7	21	82	07:22	0.4	0.12
7	7	21	82	20:46	0.7	0.72
8	7	21	82	06:59	0.4	0.04
8	7	21	82	20:39	0.9	0.44
9	7	21	82	06:46	4.7	0.39
9	7	21	82	20:35	0.6	0.33
10	7	21	82	06:58	3.4	0.15
10	7	21	82	20:34	0.5	0.48
11	7	21	82	06:58	0.3	0.04
11	7	21	82	20:42	0.6	0.56
12	7	21	82	20:57	0.7	0.54
13	7	21	82	06:34	2.6	0.31
13	7	21	82	20:31	0.6	0.23
1	7	27	82	13:49	0.6	0.07
2	7	27	82	13:51	1.0	0.06
3	7	27	82	13:50	1.5	0.07
4	7	27	82	13:51	1.2	0.07
5	7	27	82	13:59	1.2	0.09
6	7	27	82	14:12	1.3	0.06
7	7	27	82	13:52	0.9	0.06
9	7	27	82	13:58	0.4	0.17

RAIN GAUGE	MONTH	DAY	YEAR	START TIKE	DURATION HOURS	AMOUNT INCHES
10	7	27	82	14:08	0.4	0.08
11	7	27	82	14:08	0.6	0.16
12	7	27	82	14:29	0.7	0.04
13	7	27	82	13:47	0.4	0.27
13	8	4	82	00:01	11.0	0.32
5	8	4	82	18:55	1.2	0.13
13	8	4	82	07:58	2.2	0.04
13	8	4	82	11:39	0.4	0.05
1	8	5	82	04:21	2.1	0.13
1	8	5	82	09:43	0.6	0.11
2	8	5	82	03:50	2.6	0.14
2	8	5	82	09:50	0.6	0.17
3	8	5	82	04:24	2.1	0.12
3	8	5	82	09:35	0.7	0.21
4	8	5	82	04:38	0.6	0.06
4	8	5	82	09:59	0.6	0.13
5	8	5	82	04:19	2.3	0.19
5	8	5	82	10:01	0.3	0.07
6	8	5	82	04:18	2.0	0.12
6	8	5	82	09:51	0.7	0.08
7	8	5	82	03:11	2.4	0.09
7	8	5	82	09:58	0.4	0.10
8	8	5	82	04:09	1.9	0.06
8	8	5	82	09:53	0.3	0.08
9	8	5	82	04:30	1.4	0.25
10	8	5	82	04:20	0.7	0.16
11	8	5	82	04:13	1.7	0.08
11	8	5	82	09:45	0.2	0.05
12	8	5	82	04:30	1.0	0.05
12	8	5	82	10:04	0.3	0.12
13	8	5	82	10:30	0.4	0.05
3	8	6	82	16:45	0.5	0.04
3	8	6	82	20:41	0.3	0.24
8	8	6	82	20:24	0.9	0.19
11	8	6	82	15:08	1.0	0.11
12	8	6	82	15:37	6.6	0.20
1	8	7	82	09:15	4.0	0.64
2	8	7	82	09:15	3.4	0.35
3	8	7	82	09:09	2.9	0.33
4	8	7	82	09:25	2.8	0.29
5	8	7	82	10:34	2.0	0.81
6	8	7	82	10:45	1.8	0.62
7	8	7	82	08:54	3.6	0.56
8	8	7	82	08:46	3.3	0.52
9	8	7	82	08:28	4.3	1.40
10	8	7	82	10:14	2.3	1.24
11	8	7	82	08:19	4.4	1.76
12	8	7	82	08:56	4.7	0.64
13	8	7	82	10:25	2.2	1.68
7	8	9	82	13:30	0.4	0.11
13	8	10	82	00:01	7.4	0.09
5	8	10	82	01:27	1.7	0.05
7	8	10	82	00:32	1.6	0.05
8	8	10	82	01:03	2.5	0.05
9	8	10	82	01:24	1.0	0.06
10	8	10	82	00:29	1.8	0.05
11	8	10	82	00:25	1.6	0.04
12	8	10	82	01:02	1.5	0.03

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
1	8	20	82	03:10	3.3	1.26
2	8	20	82	02:36	4.2	1.38
3	8	20	82	03:09	3.2	1.01
4	8	20	82	02:03	3.7	1.22
5	8	20	82	03:05	3.4	0.90
6	8	20	82	03:15	3.5	1.22
7	8	20	82	03:20	3.4	0.90
8	8	20	82	02:47	3.8	0.82
9	8	20	82	03:23	3.4	1.08
10	8	20	82	02:30	4.3	1.10
11	8	20	82	03:28	3.4	0.95
12	8	20	82	03:30	3.2	1.06
13	8	20	82	03:03	3.3	1.02
1	8	22	82	10:14	1.4	0.14
2	8	22	82	10:10	1.1	0.12
3	8	22	82	10:16	1.5	0.14
4	8	22	82	10:11	1.6	0.06
5	8	22	82	10:10	1.9	0.23
6	8	22	82	10:04	1.9	0.20
7	8	22	82	10:16	1.6	0.19
8	8	22	82	10:08	1.5	0.16
9	8	22	82	09:59	1.9	0.15
10	8	22	82	10:13	1.7	0.21
11	8	22	82	10:13	1.9	0.20
12	8	22	82	10:20	1.6	0.11
13	8	22	82	10:01	1.7	0.24
1	8	24	82	11:45	3.2	0.24
2	8	24	82	11:10	2.9	0.22
3	8	24	82	12:01	1.9	0.22
4	8	24	82	11:58	2.1	0.23
5	8	24	82	11:44	2.3	0.16
6	8	24	82	11:59	2.6	0.19
7	8	24	82	11:58	2.0	0.21
8	8	24	82	11:46	2.1	0.23
9	8	24	82	11:45	2.6	0.19
10	8	24	82	12:01	1.8	0.16
11	8	24	82	11:56	2.1	0.17
12	8	24	82	11:57	2.6	0.21
13	8	24	82	11:36	2.1	0.15
13	8	29	82	13:39	0.9	0.09
1	8	30	82	00:01	5.0	1.44
2	8	30	82	00:01	9.5	2.09
3	8	30	82	00:01	5.8	1.61
4	8	30	82	00:01	4.3	1.21
5	8	30	82	00:01	3.5	0.80
6	8	30	82	00:01	8.5	0.73
7	8	30	82	00:01	3.6	0.77
8	8	30	82	00:01	4.0	0.77
9	8	30	82	00:01	3.0	0.52
10	8	30	82	00:01	5.2	0.62
11	8	30	82	00:01	5.8	0.69
12	8	30	82	00:01	4.0	0.77
13	8	30	82	00:01	3.6	0.76
1	8	31	82	13:42	1.0	0.12
2	8	31	82	13:49	2.4	0.11
3	8	31	82	13:57	1.5	0.13
4	8	31	82	14:01	0.9	0.11
5	8	31	82	13:41	0.8	0.09

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUN INCHES
6	8	31	82	13:55	1.2	0.09
7	8	31	82	13:56	1.0	0.11
8	8	31	82	13:55	1.0	0.11
9	8	31	82	13:42	1.4	0.09
10	8	31	82	13:47	1.1	0.10
11	8	31	82	13:56	1.0	0.11
12	8	31	82	13:46	0.9	0.11
2	9	6	82	04:25	1.6	0.11
2	9	6	82	14:41	2.8	0.11
3	9	6	82	04:09	2.0	0.10
3	9	6	82	14:45	2.7	0.21
4	9	6	82	05:24	0.9	0.04
4	9	6	82	14:52	3.9	0.14
5	9	6	82	03:30	2.6	0.11
5	9	6	82	14:39	2.7	0.12
6	9	6	82	03:40	2.1	0.05
7	9	6	82	05:09	1.0	0.08
7	9	6	82	14:37	3.4	0.17
8	9	6	82	04:56	1.1	0.11
8	9	6	82	14:43	3.2	0.18
9	9	6	82	04:48	1.2	0.11
9	9	6	82	13:34	4.2	0.13
10	9	6	82	04:41	1.4	0.11
10	9	6	82	13:41	4.1	0.16
11	9	6	82	04:52	1.2	0.10
11	9	6	82	13:31	4.1	0.15
12	9	6	82	05:10	0.9	0.09
12	9	6	82	14:19	4.1	0.22
13	9	6	82	03:16	2.8	0.10
13	9	6	82	13:55	4.0	0.15
2	9	13	82	22:53	3.4	0.13
3	9	13	82	22:52	3.5	0.12
5	9	13	82	22:56	3.4	0.09
7	9	13	82	23:17	0.7	0.07
8	9	13	82	23:11	3.3	0.06
9	9	13	82	23:18	2.2	0.03
10	9	13	82	22:55	1.3	0.06
11	9	13	82	23:12	0.8	0.06
12	9	13	82	23:27	5.1	0.10
13	9	13	82	23:01	3.7	0.10
2	9	14	82	13:24	0.7	0.02
3	9	14	82	13:24	0.8	0.06
4	9	14	82	13:47	1.0	0.07
5	9	14	82	13:21	1.0	0.04
7	9	14	82	13:23	1.0	0.11
8	9	14	82	13:39	1.1	0.04
9	9	14	82	13:16	1.3	0.11
10	9	14	82	13:25	1.0	0.08
11	9	14	82	13:26	1.1	0.08
12	9	14	82	13:37	0.7	0.09
13	9	14	82	13:25	0.5	0.03
1	9	17	82	14:17	3.6	0.91
2	9	17	82	14:08	4.2	0.95
3	9	17	82	14:13	4.2	0.98
4	9	17	82	14:12	4.5	0.91
5	9	17	82	13:57	4.3	1.07
6	9	17	82	14:13	3.2	0.94
7	9	17	82	14:03	4.7	1.02

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
8	9	17	82	14:11	4.5	0.94
9	9	17	82	14:06	3.5	0.93
10	9	17	82	14:12	4.4	0.81
11	9	17	82	14:14	4.4	0.93
12	9	17	82	14:12	4.5	0.87
13	9	17	82	13:58	3.5	1.18
2	10	6	82	14:39	0.7	0.27
3	10	6	82	14:35	0.8	0.36
5	10	6	82	14:40	0.7	0.25
6	10	6	82	14:47	0.7	0.53
7	10	6	82	14:32	0.9	0.08
8	10	6	82	14:41	0.5	0.08
9	10	6	82	14:24	0.9	0.88
10	10	6	82	14:33	0.8	0.21
11	10	6	82	14:32	0.5	0.07
12	10	6	82	14:42	0.5	0.10
13	10	6	82	14:50	0.4	0.34
1	10	8	82	20:31	7.5	0.65
2	10	8	82	20:40	7.8	0.76
3	10	8	82	20:06	6.7	0.88
4	10	8	82	21:03	7.3	0.82
5	10	8	82	20:18	7.7	0.70
6	10	8	82	20:29	5.7	0.78
7	10	8	82	20:00	8.6	0.85
8	10	8	82	19:54	8.5	0.70
9	10	8	82	20:00	6.5	0.57
10	10	8	82	20:23	6.2	0.67
11	10	8	82	20:32	7.7	0.70
12	10	8	82	19:51	8.6	0.84
13	10	8	82	20:30	5.6	0.57
1	10	19	82	11:47	9.6	0.65
2	10	19	82	06:51	1.0	0.15
2	10	19	82	11:42	9.7	0.53
3	10	19	82	06:51	1.3	0.20
3	10	19	82	14:43	7.2	0.68
4	10	19	82	14:44	7.1	0.52
5	10	19	82	06:54	0.8	0.09
5	10	19	82	14:18	7.1	0.64
6	10	19	82	06:57	0.9	0.11
6	10	19	82	14:25	7.3	0.59
7	10	19	82	06:38	1.2	0.19
7	10	19	82	14:32	7.3	0.43
8	10	19	82	06:56	1.0	0.08
8	10	19	82	12:29	9.7	0.31
9	10	19	82	06:23	1.7	0.20
9	10	19	82	14:18	7.2	0.76
10	10	19	82	06:35	2.2	0.25
10	10	19	82	11:42	10.4	0.58
11	10	19	82	06:33	2.0	0.16
11	10	19	82	12:47	8.9	0.25
12	10	19	82	06:47	1.3	0.13
12	10	19	82	12:52	9.4	0.44
13	10	19	82	06:43	1.2	0.14
13	10	19	82	14:21	8.6	0.75
14	10	19	82	06:04	16.1	0.69
1	10	28	82	17:20	1.7	0.17
2	10	28	82	17:19	2.0	0.16
3	10	28	82	17:31	1.8	0.21

RAIN GAUGE	MONTH	DAY	YEAR	START TIME	DURATION HOURS	AMOUNT INCHES
4	10	28	82	17:28	1.6	0.14
5	10	28	82	17:14	2.2	0.17
6	10	28	82	17:16	7.2	0.27
7	10	28	82	17:24	1.9	0.14
8	10	28	82	17:27	1.7	0.12
2	10	31	82	23:25	0.9	0.11
3	10	31	82	23:33	0.4	0.10
5	10	31	82	23:09	0.8	0.17

Appendix F

Moisture Content and Moisture Deficit of Soil

Appendix F
Moisture Content of Soil Expressed as Water
Equivalents (millimeters)

Date/Soil Layer (cm)	0-15	0-50	0-100	15-50	50-100	100-200
6-1-81	36.0	119.9	264.2	84.0	144.2	298.0
7-9-81	44.3	148.2	315.9	104.0	167.7	320.8
7-29-81	46.5	151.2	318.9	104.7	167.7	324.2
8-13-81	43.5	142.6	311.3	99.1	168.7	324.5
8-27-81	37.0	133.8	303.3	96.8	169.5	324.4
9-17-81	34.2	127.2	294.7	93.0	167.5	323.8
9-30-81	45.0	138.5	308.5	93.5	170.0	319.6
10-15-81	47.0	144.2	310.3	97.2	166.1	321.3
10-30-81	45.3	141.7	307.0	96.4	165.3	314.1
11-17-81	45.1	148.6	316.1	103.5	167.6	320.9
1-28-82	48.9	157.5	338.1	108.6	180.6	336.6
1-28-82	48.0	150.2	320.1	102.3	169.9	316.8
2-26-82	65.9	161.4	307.7	95.6	146.2	275.7
3-17-82	50.2	152.5	321.1	102.4	168.6	316.1
3-31-82	45.3	148.7	320.5	103.4	171.9	325.7
4-14-82	81.7	186.9	357.1	105.1	170.2	326.5
4-28-82	80.1	176.7	345.9	96.6	169.2	321.4
5-14-82	21.1	100.0	269.9	78.9	169.8	318.1
5-27-82	41.3	135.3	304.4	94.1	169.1	320.4
6-16-82	39.2	125.2	290.2	86.1	165.0	318.7
6-30-82	38.0	108.7	261.4	70.7	152.7	317.1
7-14-82	33.2	126.4	295.0	93.2	168.6	318.7
7-27-82	39.7	133.6	302.9	93.9	169.2	319.6
8-12-82	37.8	127.7	297.5	89.9	169.7	322.9
9-2-82	40.4	132.1	298.1	91.7	165.9	319.8
9-16-82	35.2	140.9	307.3	105.7	166.4	318.5
9-30-82	29.3	111.1	274.1	81.8	164.0	315.8
10-28-82	28.4	109.4	272.1	81.0	162.7	316.7
12-3-82	49.6	148.9	314.3	99.2	165.4	311.7

Appendix F
Moisture Deficit of Soil Expressed
as Water Equivalents (millimeters)

Date/Soil Layer (cm)	0-15	0-50	0-100	15-50	50-100	100-200
6-1-81	21.4	49.3	85.7	27.8	36.5	45.7
7-9-81	13.1	21.0	34.0	7.8	13.0	22.9
7-29-81	10.9	18.0	31.0	7.1	13.0	19.5
8-13-81	13.9	26.6	38.6	12.7	12.0	19.2
8-27-81	20.4	35.4	46.6	15.0	11.2	19.3
9-17-81	23.2	42.0	55.2	18.8	13.2	19.9
9-30-81	12.4	30.7	41.4	18.3	10.7	24.1
10-15-81	10.4	25.0	39.6	14.6	14.6	22.4
10-30-81	12.1	27.5	42.8	15.4	15.4	29.6
11-17-81	12.3	20.6	33.8	8.3	13.1	22.8
1-28-82	8.5	11.7	11.8	3.2	.1	7.1
1-28-82	9.4	19.0	29.8	9.5	10.8	26.9
2-26-82	-8.5	7.8	42.2	16.2	34.5	68.0
3-17-82	7.2	16.7	28.8	9.4	12.1	27.6
3-31-82	12.1	20.5	29.4	8.4	8.8	18.0
4-14-82	-24.3	17.7	-7.2	6.7	10.5	17.2
4-28-82	-22.7	-7.5	4.0	15.2	11.5	22.3
5-14-82	36.3	69.2	80.0	32.9	10.9	23.3
5-27-82	16.1	33.9	45.5	17.7	11.6	25.0
6-16-82	18.2	44.0	59.7	25.7	15.7	26.6
6-30-82	19.4	60.5	88.5	41.1	28.0	25.0
7-14-82	24.2	42.8	54.9	18.6	12.1	24.1
7-27-82	17.7	35.6	47.0	17.9	11.5	20.8
8-12-82	19.6	41.5	52.4	21.9	11.0	23.9
9-2-82	17.0	37.1	51.8	20.1	14.8	25.2
9-16-82	22.2	28.3	42.6	6.1	14.3	27.9
9-30-82	28.1	58.1	75.8	30.0	17.7	27.0
10-28-82	29.0	59.8	77.8	30.8	18.0	32.0
12-3-82	7.8	20.3	35.6	12.6	15.3	

Appendix G

Water Quality Data for Court Creek Watershed

Appendix G

Water quality data for Court Creek watershed

Temperature

Date	S5	S3	S2	N1	M1	C12	C10	C2
11/19/80	5.5	5.4	5.3	5.1	5.3	5.2	5.4	5.8
12/8/80	5.7	5.2	5.2	5.3	5.5	5.8	5.6	5.1
4/12/81	14.5	13.0	13.5	13.0	13.5	14.0	14.5	12.2
4/13/81	14.8	12.2	13.5	14.8	14.3	14.8	14.7	12.0
4/20/81	17.0	14.0	15.0	15.0	15.0	16.0	14.0	15.0
4/28/81	15.5	15.0	17.0	--	--	--	16.0	17.0
5/14/81	9.2	13.0	9.2	9.0	9.0	10.0	9.2	9.0
6/9/81	21.0	25.0	24.0	22.0	22.0	23.0	21.0	21.0
6/13/81	21.0	23.0	21.0	21.0	21.0	23.0	21.0	21.0
6/24/81	21.7	23.5	22.0	19.5	19.5	20.2	20.0	20.0
8/2/81	23.0	25.0	23.0	22.0	22.0	23.0	22.0	24.0
10/13/81	15.0	17.0	16.0	16.0	16.0	16.0	17.0	15.0

Dissolved Oxygen

Date	S5	S3	S2	N1	M1	C12	C10	C2
11/19/80	12.7	12.8	12.6	11.4	13.1	12.4	10.9	12.2
12/8/80	11.2	12.7	10.9	9.4	9.7	9.8	11.6	11.8
4/12/81	9.2	11.0	10.2	9.4	9.0	9.0	8.9	9.2
4/13/81	9.2	10.4	10.2	9.6	9.9	9.6	9.5	9.3
4/20/81	11.8	12.4	12.1	11.9	13.8	10.4	11.3	-
4/28/81	6.8	7.2	4.7	-	-	-	6.3	-
5/14/81	10.2	9.9	10.2	10.4	8.9	9.9	10.0	10.2
6/9/81	8.4	10.2	9.2	8.2	7.9	8.1	8.5	8.2
6/13/81	7.2	9.2	7.0	6.6	5.6	6.9	6.6	6.5
6/24/81	7.3	8.9	7.7	7.01	7.0	7.15	7.2	6.2
8/2/81	8.0	10.2	8.5	6.7	7.6	7.7	8.0	6.0

Appendix G (Cont'd.)

pH

Date	S5	S3	S2	N1	M3	M1	C12	C10	C2
11/19/80	8.28	8.28	8.45	8.32		8.58	8.18	8.35	8.35
12/8/80	7.70	—	7.35	7.52		7.48	7.49	7.44	7.27
4/12/81	7.96	8.16	7.90	7.78		7.56	7.95	7.80	7.50
4/13/81	7.95	8.10	7.99	7.66		7.60	8.00	7.75	7.60
4/20/81	8.22	8.18	8.23	8.16		8.05	8.02	7.87	8.12
4/28/81	7.95	8.26	7.68	7.50		7.21	8.03	7.66	7.37
5/14/81	7.69	7.94	7.59	7.61		7.33	7.89	7.55	7.66
6/9/81	8.17	8.57	8.22	7.81		7.92	7.80	8.02	7.64
6/13/81	7.73	8.51	7.66	7.67		7.47	7.86	7.51	7.47
6/24/81	8.13	8.42	8.12	7.61		7.52	7.85	7.198	7.65
8/2/81	7.73	8.20	7.62	7.40	8.20	7.32	7.82	7.70	7.52
10/3/81	8.16	8.42	8.41	8.41		8.33	8.24		8.31

Total Alkalinity (mg/l)

Date	S5	S3	S2	N1	M3	M1	C12	C10	C2
11/19/80	232	148	148	276		274	169	192	184
12/8/80	153	—	122	138		140	141	124	128
4/12/81	181	152	147	145		162	181	172	132
4/13/81	189	151	153	151		174	178	170	178
4/20/81	209	63	160	248		225	217	194	216
4/28/81	157	147	122	125		88	172	132	102
5/14/81	126	142	101	129		107	150	120	149
6/9/81	139	143	150	139		164	162	183	139
6/13/81	132	139	87	126		96	135	103	107
6/24/81	155	133	121	121		197	175	118	116
8/2/81	139	132	109	85	303	84	135	131	128
10/13/81	267	146	196	273		307	192	—	254

Appendix G (Cont'd.)

Total Dissolved Solids
(mg/l)

Date	S5	S3	S2	N1	M3	M1	C12	C10	C2
11/19/80	663	—	420	435		468	336	367	417
12/8/80	488	—	258	293		318	320	287	293
4/12/81	660	465	400	375		430	385	440	330
4/13/81	612	424	400	308		384	344	348	380
4/20/81	644	420	428	444		388	424	368	420
4/28/81	564	444	288	156		128	380	312	168
5/14/81	416	416	168	204		200	288	232	244
6/9/81	620	452	408	300		360	388	364	284
6/13/81	460	428	204	188		148	296	218	200
6/24/81	542	450	166	172		190	246	240	186
8/2/81	520	476	356	188	476	196	248	332	236
10/13/81	784	424	456	436		456	440		440

Sulfate
(mg/l)

Date	S5	S3	S2	N1	M3	M1	C12	C10	C2
11/19/80	128	—	72	26		21	22	25	49
12/8/80	201	—	39	43		42	66	63	40
4/12/81	267	172	133	49		54	53	61	48
4/13/81	258	166	138	47		50	55	61	62
4/20/81	272	178	162	66		56	78	74	88
4/28/81	238	164	80	31		31	62	50	32
5/14/81	194	175	43	31		30	59	47	50
6/9/81	228	167	132	63		55	38	58	53
6/13/81	196	162	205	30		28	42	32	24
6/24/81	188	166	94	24		30	51	39	27
8/2/81	164	156	94	19	59	20	51	44	27
10/13/81	302	156	143	68		59	75	—	66

Appendix G (Cont'd.)

Chloride
(mg/l)

Date	S5	S3	S2	N1	M3	M1	C12	C10	C2
11/19/80	13	--	10	23		21	31	30	16
12/8/80	9	--	16	15		15	26	21	18
4/12/81	11	8	10	14		19	32	13	30
4/13/81	11	9	10	14		19	33	28	21
4/20/81	12	8	12	22		21	38	25	23
4/28/81	10	8	8	2		4	27	19	6
5/14/81	3	9	5	7		8	26	16	12
6/9/81	15	10	11	13		23	44	17	17
6/13/81	4	9	9	6		5	22	14	10
6/24/81	11	12	11	7		9	28	17	9
8/2/81	7	7	7	3	25	4	21	17	9
10/13/81	10	9	11	22		23	47	--	24

Suspended Sol:ids
(mg/l)

Date	S5	S3	S2	N4	N3	N1	M3	M1	C12	C10	C4	C2
11/19/80	26		7	--		1	--	5	4	5	--	5
12/8/80	142	-	132	--	--	860	-	616	50	260	800	1320
4/12/81	250	11	270	1012	848	2410	870	1320	152	615	1650	4670
4/13/81	153	22	152	760	616	1240	588	1100	65	444	1840	1840
4/14/81	217	17	173	488	624	852	508	976	72	404	940	2680
4/20/81	32	13	44	46	40	48	388	444	384	398	82	112
4/28/81	460	26	1924	4460	6080	7210	5250	9020	128	2050	10090	13450
5/14/81	744	755	6170	2430	2350	6400	2980	3350	288	1820	3890	4830
5/15/81	82	7	91	76	154	194	204	148	14	143	80	520
6/9/81	33	66	128	308	406	930	238	360	26	172	1140	2800
6/13/81	1040	796	6340	6250	7050	14710	1360	9640	195	3230	7700	11835
6/15/81	63	10	76	234	294	696	268	464	37	188	850	1460
6/24/81	360	306	936	2130	2470	6520	1500	5220	104	1800	7110	15520
7/28/81	265	9	202	-	-	4270	-	660	43	288	-	5570
8/2/81	944	88	1820	4040	4090	6490	1830	4370	348	1100	8590	10600
10/13/81	83	10	1820	176	-	29	27	25	3	7	-	10

Appendix G (Cont'd.)

Date	Nitrate (mg/l NO ₃ -N)									
	^{1.325} S5	^{0.26} S3	S2	N4	N1	M3	M1	C12	C10	C2
11/19/80	1.04 ³	—	0.10	—	2.20		4.01	0.92	1.21	0.72
12/8/80	1.32 ⁶	—	2.51	—	5.12		5.86	2.46	3.61	4.57
4/12/81	1.46 ⁹	0.22	0.95 ^v	1.39	1.20		2.00	3.03	4.08	4.40
4/13/81	1.33 ⁹	0.25	0.72	1.26	1.10		1.84	2.94	3.92	5.60
4/20/81	2.19 ¹⁵	0.27	0.41	6.81	5.90		7.45	5.60	4.24	4.48
4/28/81	1.34 ⁸	0.29	1.99	2.88	2.28		1.85	3.20	3.31	2.13
5/14/81	0.87 ²	0.22	2.02	4.00	3.72		0.92	3.00	2.93	3.56
6/9/81	3.11 ¹²	0.68	1.63	5.59	5.03		7.32	4.20	5.18	4.62
6/13/81	1.12 ⁹	0.48	3.14	3.19	2.82		1.58	3.60	2.25	2.65
6/24/81	2.41 ¹¹	0.35	1.35	4.39	2.69		2.54	3.10	2.51	2.38
8/2/81	1.08 ⁴	0.05	0.55	1.48	1.23	2.95	1.32	1.70	1.30	1.62
10/13/81	0.01.	<0.10	0.11	0.21	0.58		1.38	0.62	—	0.29

Date	Total Phosphorus (mg/l)									
	S5	S3	S2	N4	N1	M3	M1	C12	C10	C2
11/19/80	0.05		0.04		0.03		0.13	0.04	0.05	0.04
12/8/80	0.31	—	0.73	—	1.11		1.35	0.27	0.64	1.34
4/12/81	0.25	0.04	0.32	0.84	1.77		2.39	0.24	0.73	1.93
4/13/81	0.09	0.06	0.22	1.01	1.26		1.94	0.16	0.71	1.58
4/20/81	0.06	0.02	0.10	0.14	0.16		0.43	0.33	0.35	0.25
4/28/81	0.06	0.04	0.66	0.44	0.14		0.29	0.20	1.80	2.15
5/14/81	0.67	0.35	5.94	4.17	4.39		4.01	0.38	1.45	4.33
6/9/81	0.10	0.08	0.21	0.58	1.11		0.37	0.03	0.31	5.79
6/13/81	0.16	0.42	5.80	5.63	6.29		9.47	3.94	2.97	9.35
6/24/81	0.38	0.25	1.45	2.25	5.20		7.22	0.32	1.95	10.8
8/2/81	1.07	0.08	2.00	4.79	5.14	0.63	5.07	0.35	2.63	7.76
10/13/81	0.11	0.03	0.14	—	0.14		0.44	0.14	—	0.07

Appendix G (Cont'd.)

Dissolved Phosphorus
(mg/1)

Date	S5	S3	S2	N4	N1	M3	M1	C12	C10	C2
11/19/80	0.01	--	0.01	--	0.01		0.09	0.02	0.03	0.01
12/8/80	0.11	--	0.39	--	9.21		0.34	0.18	0.12	0.10
4/12/81	0.02	tr.	0.05	0.10	0.09		0.16	0.03	0.05	0.08
4/13/81	0.03	0.01	0.02	0.15	0.14		0.20	0.04	0.07	0.09
4/20/81	0.02	0.02	0.03	0.10	0.09		0.10	0.07	0.07	0.07
4/28/81	0.04	0.01	0.04	0.11	0.10		0.15	0.07	0.08	0.11
5/14/81	0.05	0.01	0.19	0.16	0.07		0.24	0.08	0.07	0.07
6/9/81	0.04	tr.	0.14	0.16	0.09		0.19	0.03	0.07	0.09
6/13/81	0.06	0.05	0.20	0.12	0.07		0.15	0.10	0.08	0.11
6/13/81	0.03	0.01	0.11	0.13	0.07		0.14	0.08	0.07	0.07
6/24/81	0.04	0.01	0.14	0.13	0.11	0.48	0.20	0.10	0.09	0.12
8/2/81	0.04	0.01	0.02	--	0.04		0.33	0.11	--	0.03
10/14/81										

Total Ammonia Nitrogen

Date	S5	S3	S2	N4	N1	M3	M1	C12	C10	C4	C2
11/19/80	0.25	--	0.28	--	0.37	--	0.14	0.53	0.31	--	0.26
12/8/80	0.63	--	1.23	--	0.87	--	1.18	0.62	0.77	--	0.96
4/12/81	0.14	0.16	0.24	--	0.78	--	0.98	0.36	0.66	--	1.29
4/13/81	0.16	0.53	0.09	--	0.54	--	0.35	0.09	0.41	--	0.62
4/20/81	0.18	0.12	0.22	--	0.29	--	0.22	0.19	0.20	--	0.19
4/28/81	0.21	0.04	0.46	1.08	1.51	--	3.26	0.06	0.41	--	2.45
5/14/81	0.13	0.20	0.84	0.66	0.78	--	2.63	0.19	0.33	--	0.72
6/9/81	0.32	0.32	0.33	0.60	0.70	0.43	0.59	0.19	0.20	0.41	0.72
6/9/81	0.22	0.23	1.29	1.42	1.78	0.44	2.25	0.09	0.69	1.15	2.36
6/13/81	0.16	0.35	0.18	0.19	0.13	0.14	0.32	0.18	0.21	0.26	0.54
6/16/81	0.26	0.62	0.33	0.55	1.45	0.70	1.71	0.10	0.44	1.40	2.08
6/24/81	0.18	0.21	0.34	0.78	1.14	1.50	1.12	0.12	0.42	1.28	1.43
8/2/81	0.08	0.10	0.12	0.11	0.07	0.29	0.09	0.08	0.06	--	0.07
10/13/81											

Appendix G (Cont'd.)

Dissolved Ammonia Nitrogen

Date	S5	S3	S2	N4	N1	M3	M1	C12	C10	C4	C2
11/19/80	0.11	—	0.22	—	0.35	--	0.02	0.32	0.10		0.12
12/8/80	0.63	—	1.23	—	0.07	--	0.52	0.54	0.07		0.35
4/12/81	0.12	0.04	0.22	0.43	0.59	—	0.57	0.02	0.26		0.83
4/13/81	0.16	0.39	0.09	0.17	0.53	—	0.35	0.09	0.41		0.51
4/20/81	0.17	0.12	0.12	0.25	0.28	--	0.22	0.19	0.19		0.19
4/28/81	0.07	0.04	0.04	0.07	0.10	—	0.13	0.01	0.05		0.11
5/14/81	0.08	0.04	0.22	0.26	0.19	—	1.66	0.11	0.10		0.00
6/9/81	0.32	0.32	0.33	0.60	0.70	0.43	0.49	0.17	0.20		0.72
6/13/81	0.19	0.12	0.06	0.05	0.15	0.04	0.05	0.06	0.15		0.41
6/16/81	0.14	0.34	0.13	0.13	0.04	0.13	0.03	0.02	0.06		0.17
6/24/81	0.01	0.44	0.17	0.09	0.05	0.13	0.09	0.08	0.17		0.09
8/2/81	0.17	0.14	0.15	0.21	0.19	1.18	0.30	0.08	0.08	0.09	0.24
10/13/81	0.08	0.08	0.12	0.08	0.07	0.17	0.08	0.07	0.05		0.03

Total Kjeldahl Nitrogen
(mg/l)

Date	S5	S3	S2	N4	N1	M3	M1	C12	C10	C4	C2
11/19/80	0.59	—	0.78	--	1.17	--	0.93	1.52	1.23	—	1.05
12/8/80	1.08	—	1.32	—	2.22	—	2.67	0.68	1.53	—	2.80
4/28/81	2.53	1.18	6.17	—	17.82	—	27.60	2.53	6.82	—	25.58
5/14/81	1.01	1.22	8.72	4.22	8.63	--	9.78	0.96	3.10	—	6.22
6/9/81	0.78	0.34	0.71	2.47	2.50	0.91	1.68	0.89	0.88	2.85	6.38
6/13/81	2.37	1.26	10.76	15.95	20.54	4.00	21.37	1.14	7.05	14.35	20.25
6/24/81	5.24	1.45	2.49	6.01	12.29	5.70	15.12	0.86	5.24	15.46	21.65
8/2/81	2.00	0.95	3.85	7.45	11.06	8.59	9.55	0.91	3.42	14.35	15.34
10/13/81	0.50	0.62	0.41	0.85	0.77	0.76	0.40	0.26	—	--	0.30

Appendix G (Conc'd.)

Turbidity
(ntu)

Date	S5	S3	S2	N1	M3	M1	C12	C10	C2
11/19/80	4	-	2	2		3.5	2	4	3
12/8/80	38	--	48	167		161	25	91	208
4/12/81	48	4	37	336		266	31	121	597
4/13/81	30	4	26	250		218	20	89	336
4/20/81	9	4	8	12		91	85	113	21
4/28/81	168	4	469	2020		2295	29	479	3725
5/14/81	155	35	1288	1082		688	37	452	813
6/9/81	13	5	39	744		540	9	49	1793
6/13/81	193	60	1380	2900		2136	37	664	2600
6/24/81	"75	32	296	1535		1577	29	458	3486
8/2/81	26D	12	407	960		1380	29	271	2360
10/13/81	11	4	12	14	9.5	13	0	-	7

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Heavy Metals
(mg/l)

Date	Total Iron		Dissolved Iron		Total Lead		Dissolved Lead		Total Copper		Dissolved Copper		Total Zinc		Dissolved Zinc	
	S5	C12	S5	C12	S5	C12	S5	C12	S5	C12	S5	C12	S5	C12	S5	C12
11/19/80	0.2	0.3	0.3	0.3	ND	ND	ND	ND	trace	trace	trace	trace	trace	trace	trace	trace
12/8/80	4.4	2.7	0.2	0.3	ND	ND	ND	ND	.02	.02	.01	.01	.03	.04	.01	.03
4/12/81	5.9	4.4	0.9	0.9	ND	ND	ND	ND	.02	.03	.01	.01	.04	.05	.03	.03
4/13/81	4.1	2.2	ND	ND	ND	ND	ND	ND	.02	.03	.02	.01	.03	.03	.03	.03
4/20/81	0.6	10.4	ND	ND	ND	0.05	ND	ND	.01	.01	.01	.01	.04	.08	.02	.05
4/28/81	19.4	2.8	trace	trace	0.02	0.04	ND	ND	.03	.06	.01	.01	.26	.10	.01	.03
5/14/81	31.5	6.5	trace	trace	0.02	0.04	ND	ND	.04	.03	.01	.01	.09	.07	.03	.02
6/9/81	0.8	0.8	ND	ND	ND	ND	ND	ND	.01	.01	.01	.01	.01	.02	.01	.02
6/13/81	3.1	4.7	trace	ND	0.03	0.06	ND	ND	.03	.01	.01	.02	.16	.10	.04	.09
6/24/81	8.0	2.3	trace	trace	0.02	ND	ND	ND	.02	.01	.01	.01	.30	.18	.01	.01
8/2/81	19.5	1.5	ND	trace	0.04	0.04	ND	ND	.04	.05	trace	.01	.13	.04	trace	.01
10/13/81	2.0	0.2	trace	trace	ND	ND	ND	ND	trace	ND	trace	ND	.02	.01	trace	trace

Appendix H

Fish Survey Station Descriptions and Fish Collections
on Court Creek Watershed

STREAM SURVEY
(Station Description)

County Knox

Location: T Persifer R 3E S 22 NE 1/2 of NE 1/2

Location from Nearest Town 1 mile east of Appleton

Date August 12, 1980

Name of Stream Court Creek

Tributary Relationship Spoon River Total Length of Stream 14.3 miles Total Length Channelized _____

Station No. C-3 Ownership Site owner by Roy Conover in 1980

Station Location: Upper _____ Middle _____ Lower XX

1. Time 9am Secchi Reading 16 in. (silt + Bloom) Water Temp 22.1° C (70° F) Air Temp 72° F
D.O. - 7.7 ppm

2. Water Color Brown Sky (Weather) Clear pH 8.1 Total Alkalinity 210 ppm

3. Velocity (ft./sec.) 0.6 feet/sec. Max. Depth 2.5 feet Av. Depth 1.0 feet

4. Water Level: Low XX Normal _____ High _____ Flood _____

Max. Width 30.0 feet Min. Width 15.0 feet Av. Width 20.0 feet

5. Total Length of Station (Identify upper and lower boundaries) 300 feet (from the riffle area located just upstream from old iron township bridge to a point 300 feet downstream)

6. No. Pools one No. Riffles two % Pools 95 % Riffles 5

7. Bottom types (%): Silt (muck) 5% Sand 75% Gravel 20% Rubble _____ Boulders _____ Bedrock _____

8. Immediate Shore Cover (%): Denuded _____ Grasses 25% Shrubs 15% Trees 60%

9. Degree of Shading at 12 noon (%) Approximately 60%

10. Aquatic Vegetation: (% and type) Light algae coverage on gravel in riffle area

11. Stream Cover at time of survey Undercut bank, snags, drift and overhanging grasses.

12. Stream Permanent Yes Or Intermittent _____

13. Remarks: (pollution, natural food, flood marks, ice flow, springs, fishing intensity, dams, undercut banks, bank erosion, cattle grazing, fencing, condition of watershed, fish population, changes in stream habitat, cause of turbidity, prior fish kills, commercial fishing, angling, fish preserve, primary use).

(See remarks on reverse side)

(Continue remarks and draw map of station on reverse side)

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F.M.4.0 6/72

Survey crew: Ken Russell, Bob Williamson and Larry Smith of I.D.O.C. and Don Roseboom and Rick Twait of the Illinois State Water Survey.

Court Creek station #C-3, located 2.5 miles upstream from the stream's confluence with the Spoon River, has a drainage area of approximately 72 square miles. The aquatic habitat at this site is characterized by a streambed of 75 percent shifting sand; stable banks covered by a mixture of grasses, annual weeds, shrubs and small trees (unstable banks West of the bridge); a low degree of channel sinuosity; long, low gradient fine gravel riffles and medium depth pools having minimal instream cover. Within recent years, no fish kills have been reported on Court Creek; however, many potential sources of pollution are located in the drainage basin. Flooding and highly fluctuating water levels are common at this site due to the rapidly drained land area of intensely cultivated cropland in the watershed.

Fishery inventories, using the rotenone-potassium permanganate method of collection, have been completed at this site in 1964 and again in 1980. A 1975 distributional study of "The Fishes of the Spoon River Basin" included this site, but fish were only collected by seine. The 1980 fish collection revealed 22 species having a standing crop of 100.24 pound per acre. Forage species represented 95 percent of the collection by number and 55 percent by weight. Bluntnose minnow, considered to be a pollution-tolerant species, was the most abundant fish followed by the sand shiner which is normally associated with degraded habitat in the form of an unstable sand substrate. Game fish species comprised only 4 percent of the collection by weight. Comparing the 1980 and 1964 surveys, very little change is evident in the fishery.

The quality of the aquatic habitat at station C-3 of Courc Creek, as assessed by the observation of streambed materials, bank stability, degree of channel sinuosity, instream cover, pool depth, riffle characteristics, fish biomass (standing crop) and species diversity, composition and density, was rated slightly better than fair or semi-degraded.

STREAM SURVEY

(Station Description)

County Knox

Location: T Persifer R 3E S 20 NW 1/4 of SW 1/4

Location from
Nearest Town 2 miles southwest of Appleton

Date August 12, 1980

Name of Stream Court Creek

Tributary Relationship Spoon River Total Length of Stream 14.3 miles Total Length Channelized _____

Station No. C-6 Ownership: Jack Olmstead

Station Location: Upper _____ Middle XX Lower _____

1. Time 1:00 pm Secchi Reading 18 inch (bloom) Water Temp 26.2°C (79°F) Air Temp 78°F

2. Water Color Brown Sky (Weather) Clear pH 8.4 D_{10}^{25} - 9.6 ppm
Alkalinity 170 ppm

3. Velocity (ft./sec.) 0.2 ft/sec. Max. Depth 2.66 feet (32") Av. Depth 1.5 feet

4. Water Level: Low XX Normal _____ High _____ Flood _____

Max. Width 30.0 feet Min. Width 15.0 feet Av. Width 27.0 feet

5. Total Length of Station (Identify upper and lower boundaries) 300 feet (south or upstream 500 feet from old iron township bridge to the lower station limits and then 300 feet upstream)

6. No. Pools one No. Riffles one % Pools 95 % Riffles 5

7. Bottom types (%): Silt (muck) 10 Sand 10 Gravel 50 Rubble 20 Boulders _____ Bedrock 10

8. Immediate Shore Cover (%): Denuded 10 Grasses 30 Shrubs 10 Trees 50

9. Degree of Shading at 12 noon (%) 50 percent

10. Aquatic Vegetation (% and type) Partial coverage of gravel and rubble with algae

11. Stream Cover at time of survey Undercut tree roots and banks, brush, logs and large rubble

12. Stream Permanent Yes Or Intermittent _____


13. Remarks: (pollution, natural food, flood marks, ice flow, springs, fishing intensity, dams, undercut banks, bank erosion, cattle grazing, fencing, condition of watershed, fish population, changes in stream habitat, cause of turbidity, prior fish kills, commercial fishing, angling, fish preserve, primary use).

(See remarks on reverse side)

(Continue remarks and draw map of station on reverse side)

Page 1 of 2 Pages

F.M. 4.0 6/72

(49990-5M sets-4-73) 1  Survey crew: Bob Williamson, Ken Russell and Larry Smith of D.O.C. and Don Roseboom and Rich Twait of the Illinois State Water Survey.

Court Creek station #C-6, located 6.1 miles upstream from the stream's confluence with the Spoon River, has a drainage area of approximately 35 square miles. The aquatic habitat is characterized by a streambed consisting of bedrock, gravel and rubble with low amounts of silt and sand; stable banks covered by a mixture of grasses, shrubs and mature trees; a low degree of channel sinuosity; long, low gradient pools of sufficient depth with good instream cover of snags and undercut tree roots; and high gradient riffles composed of coarse gravel and large rubble. No known fish kills have been reported at this site; however, many potential sources of pollution exist in the drainage area. Highly fluctuating water levels occur at this site, but not with the frequency of other sites further downstream having more watershed drainage.

The 1980 fish collection revealed 23 species having a standing crop of 302.73 pounds per acre. Forage fish species represented 88 percent of the collection by number, but only 10 percent by weight. Game or sport fish species, mainly consisting of smallmouth bass, comprised 22 percent of the collection by weight. Bluntnose minnow, considered to be a pollution-tolerant species, was the most abundant fish; however, a highly diverse population of smallmouth bass (pollution-intolerant species) in the collection illustrated a balanced aquatic habitat.

The quality of the aquatic habitat at station C-6 of Court Creek, as assessed by the observation of streambed materials, bank stability, degree of channel sinuosity, instream cover, pool depth, riffle characteristics, fish biomass (standing crop) and species diversity and fish composition and density, was rated as excellent; in fact, the best on the entire Court Creek drainage basin.

STREAM SURVEY

(Station Description)

County Knox

Location: T Knox R 2E S 18 NE 1/2

Location from
Nearest Town South edge of East Galesburg

Date August 13, 1980

Name of Stream Court Creek

Tributary Relationship Spoon River Total Length of Stream 14.3 miles Total Length Channelized _____

Station No. C-12 Ownership Santa Fe Railroad

Station Location: Upper XX Middle _____ Lower _____

1. Time 9 AM Secchi Reading 12 inches (silt) Water Temp. 20.5°C (69°F) Air Temp 70°F

2. Water Color brown-gray Sky (Weather) cloudy pH 7.9 D.O. - 3.9 ppm
Total Alkalinity 154 ppm

3. Velocity (ft./sec.) 0.1 feet/sec Max. Depth 1.9 feet Av. Depth 1.0

4. Water Level: Low X Normal _____ High _____ Flood _____

Max. Width 15 feet Min. Width 10 feet Av. Width 13 feet

5. Total Length of Station (Identify upper and lower boundaries) 150 feet (west from Gale Lake bridge to a point 150 feet upstream)

6. No. Pools one No. Riffles one % Pools 98 % Riffles 2

7. Bottom types (%): Silt (muck) 40 Sand 10 Gravel 30 Rubble 20 Boulders _____ Bedrock _____

8. Immediate Shore Cover (%): Denuded _____ Grasses 10% Shrubs 10% Trees 40% Gravel bank 40%

9. Degree of Shading at 12 noon (%) 90%

10. Aquatic Vegetation (% and type) none observed

11. Stream Cover at time of survey Rubble, boulders, tree roots and overhanging grasses

12. Stream Permanent yes Or Intermittent _____


13. Remarks: (pollution, natural food, flood marks, ice flow, springs, fishing intensity, dams, undercut banks, bank erosion, cattle grazing, fencing, condition of watershed, fish population, changes in stream habitat, cause of turbidity, prior fish kills, commercial fishing, angling, fish preserve, primary use).

(See remarks on reverse side)

(Continue remarks and draw map of station on reverse side)

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P.M. 4.0 6/72

(49990-5M sets 4-73)  Survey crew: Dan Sallee, Ken Russell and Larry Smith of D.O.C. and Don Roseboom and Rick Twait of the Illinois State Water Survey.

Court Creek station #C-12, located 14.0 miles upstream from Court Creek's confluence with the Spoon River, has a drainage area of approximately 4.6 square miles. Urban areas of Galesburg and East Galesburg contribute more than half the rainfall runoff to this site and pose a serious threat to the water quality; however, no known fish kills have been reported. The aquatic habitat is characterized by a streambed consisting of high percentages of sand, gravel and rubble: stable banks covered by a mixture of grasses, shrubs and small trees; no channel sinuosity; a long low gradient pool of shallow depth and a short riffle area littered with discarded bricks and broken concrete. Highly fluctuating water levels occur at this site due to street storm water drainage in the immediate watershed.

The 1980 fish collection revealed 13 species having a standing crop of 213.64 pounds per acre. Forage fish species represented 72 percent of the collection by number and 64 percent by weight. Green sunfish dominated the sport fish list and are thought to be escapement from two small, shallow ponds in the immediate drainage area. The overall fish collection was characterized by pollution-tolerant species and low species diversity.

The quality of the aquatic habitat at station #C-12 of Court Creek, as assessed by the observation of streambed materials, bank stability, degree of channel sinuosity, instream cover, pool depth, riffle characteristics, fish biomass (standing crop), species diversity and fish composition and density, was rated slightly below fair or semi-degraded.

STREAM SURVEY

(Station Description)

County Knox

Location: T Persifer R 3E S 18 NE 1/4

Location from Nearest Town 3 miles northeast of Knoxville

Date August 26, 1980

Name of Stream North Creek

Tributary Relationship Court Creek Total Length of Stream 11.9 miles Total Length Channelized _____

Station No. N-2 Ownership Conrad Gustafson

Station Location: Upper _____ Middle _____ Lower XX

1. Time 9am Secchi Reading 30 inches Water Temp 20.8°C (69°F) Air Temp 70°F D.O. - 7.0 ppm

2. Water Color Brown Sky (Weather) Clear pH 8.2 Total Alkalinity 287 ppm

3. Velocity (ft./sec.) 0.5 Max. Depth 3.8 feet Av. Depth 2.0 feet

4. Water Level: Low _____ Normal XX High _____ Flood _____

Max. Width 23 feet Min. Width 10 feet Av. Width 16 feet

5. Total Length of Station (Identify upper and lower boundaries) 200 feet (upper limits of station begin approximately 1/2 mile downstream from concrete township bridge)

6. No. Pools one No. Riffles none % Pools 100% % Riffles _____

7. Bottom types (%): Silt (muck) 10% Sand 75% Gravel 15% Rubble _____ Boulders _____ Bedrock _____

8. Immediate Shore Cover (%): Denuded 5% Grasses 20% Shrubs 5% Trees 50% Sand bar 50%

9. Degree of Shading at 12 noon (%) Approximately 20%

10. Aquatic Vegetation (% and type) None

11. Stream Cover at time of survey Drift, snags, tree roots and deep pool.

12. Stream Permanent Yes Or Intermittent _____


13. Remarks: (pollution, natural food, flood marks, ice flow, springs, fishing intensity, dams, undercut banks, bank erosion, cattle grazing, fencing, condition of watershed, fish population, changes in stream habitat, cause of turbidity, prior fish kills, commercial fishing, angling, fish preserve, primary use).

(See remarks of reverse side)

(Continue remarks and draw map of station on reverse side)

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F M. 4.0 6/72

(49990-5M Sets-4-73) 14 

Survey crew: Ken Russell, Bob Williamson and Larry Smith of I.D.O.C. and Don Roseboom and Rick Twait of the Illinois State Water Survey.

North Creek station # N-2, located 1.7 miles upstream from the stream's confluence with Court Creek, has a drainage area of approximately 28 square miles. The aquatic habitat is characterized by a streambed consisting primarily of shifting sand with lesser amounts of gravel; very unstable, raw banks on the outside bends of the channel; a low degree of channel sinuosity; long, low gradient pools of sufficient depth having good instream cover of snags and drift; and low gradient riffles consisting of fine gravel. The fishery habitat of lower North Creek is generally degraded due to an unstable stream bed, lack of instream cover, channel sinuosity and pool depth; however, the site described above in station # N-2 is favorable habitat. Fish kills, resulting from discharges of livestock wastes, have been known to occur at this section of North Creek. Highly fluctuating water levels occur at this site with annual frequency.

The 1980 fish collection revealed 21 species having a standing crop of 147.40 pounds per acre. Forage fish represented 81 percent of the collection by number; however, the total weight was nearly equal among the sport, commercial and forage species. The quality of the sport fishery was poor and relates directly to the fact that the sampling area was an "island" of good habitat within a larger area of inferior habitat. No strong correlation seemed to exist between pollution tolerant and intolerant species.

The quality of the aquatic habitat at station # N-2 of North Creek, as assessed by the observation of streambed materials, bank stability, degree of channel sinuosity, instream cover, pool depth, riffle characteristics, fish biomass (standing crop), species diversity and fish composition and density, was rated slightly below good or semi-balanced.

STREAM SURVEY

(Station Description)

County Knox

Location: T Knox R 2E S 1 NE 1/2

Location from Nearest Town 5 1/2 miles northeast of Knoxville

Date August 25, 1980

Name of Stream North Creek

Tributary Relationship Court Creek Total Length of Stream 11.9 miles Total Length Channelized _____

Station No. N-3 ownership Theodore Larson

Station Location: Upper _____ Middle X Lower _____

1. Time 5 pm Secchi Reading 36 inches Water Temp 28.9°C (84°F) Air Temp 79°F

2. Water Color clear Sky (Weather) clear pH 8.3 D.O. Total - 11.5 ppm Alkalinity 268 ppm

3. Velocity (ft./sec.) 0.6 ft./sec Max. Depth 3.0 feet Av. Depth 1.4 feet

4. Water Level: Low _____ Normal X High _____ Flood _____

Max. Width 28 feet Min. Width 10 feet Av. Width 20 feet

5. Total Length of Station (Identify upper and lower boundaries) 250 feet (upper limits of station begin approximately 0.6 miles downstream from Fremont Road bridge)

6. No. Pools 2 No. Riffles 2 % Pools 98 % Riffles _____

7. Bottom types (%): Silt (muck) 10 Sand 60 Gravel 30 Rubble _____ Boulders _____ Bedrock _____

8. Immediate Shore Cover (%): Denuded _____ Grasses 10 Shrubs 10 Trees 50 steep mud bank 30%

9. Degree of Shading at 12 noon (%) 30%

10. Aquatic Vegetation (% and type) none

11. Stream Cover at time of survey drift, snags, undercut banks, riffles and tree roots

12. Stream Permanent yes Or Intermittent _____

13. Remarks: (pollution, natural food, flood marks, ice flow, springs, fishing intensity, dams, undercut banks, bank erosion, cattle grazing, fencing, condition of watershed, fish population, changes in stream habitat, cause of turbidity, prior fish kills, commercial fishing, angling, fish preserve, primary use).

(See remarks on reverse side)

(Continue remarks and draw map of station on reverse side)

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F.M. 4.0 6/72

Survey crew: Dan Sallee, Ken Russell and Larry Smith of D.O.C. and

(49990-5M sets-4-73) Don Roseboom and Rick Twait of Illinois State Water Survey.

North Creek station #N-3, located 4.4 miles upstream from the stream's confluence with Court Creek, has a drainage area of approximately 24 square miles. The aquatic habitat is characterized by a streambed consisting of high amounts of sand (60%) and gravel (30%) with low amounts of silt or clay; unstable banks covered by a mixture of grasses, willows, shrubs and mature trees; a moderate degree of channel sinuosity; long, medium gradient pools of sufficient depth having good instream cover of snags and drift piles; and long riffles composed of varying amounts of fine to coarse gravel. Fish kills, resulting from discharge of livestock confinement wastes, have been known to occur in this section of North Creek. Highly fluctuating water levels occur at this site with annual frequency.

The 1980 fish collection revealed 24 species having a standing crop of 148.50 pounds per acre. Forage fish represented 67 percent of the collection by number; however, the total weight was nearly equal among the sport, commercial and forage species. The sampling site contained the greatest fish species diversity (24 species per sampling station) of any site within the 1980 Court Creek Watershed Investigations. Sport fish and pollution-intolerant species comprised a high percentage of the overall fish collection, illustrating a balanced aquatic habitat

The quality of the aquatic habitat at station #N-3 of North Creek, as assessed by the observation of streambed materials, bank stability, degree of channel sinuosity, instream cover, pool depth, riffle characteristics, fish biomass (standing crop), species diversity and fish composition and density, was rated as good.

STREAM SURVEY
(Station Description)

County Knox

Location: T Sparta R 2E S 25 NW 1/4

Location from
Nearest Town 3 miles southeast of Wataga

Date 8-26-80

Name of Stream North Creek

Tributary Relationship Court Creek Total Length of Stream 11.9 miles Total Length Channelized _____

Station No. N-5 ownership Owned in 1980 by Midland Coal Co.

Station Location: Upper Middle _____ Lower _____

1. Time 4:30 pm Secchi Reading 24" Water Temp 25.0°C (77°F) Air Temp 78°F

2. Water Color brown Sky (Weather) clear pH 8.3 D.O. - 8.9 ppm
Total Alkalinity 332 ppm

3. Velocity (ft./sec.) 0.2 Max. Depth 3.0 feet Av. Depth 1.5 feet

4. Water Level: Low _____ Normal High _____ Flood _____

Max. Width 18 feet Min. Width 5 feet Av. Width 14 feet

5. Total Length of Station (Identify upper and lower boundaries) 150 feet (upper limits of station begin approximately 700 feet downstream from west line of section 25)

6. No. Pools one No. Riffles one % Pools 99 % Riffles _____

7. Bottom types (%): Silt (muck) 15 Sand 75 Gravel 10 Rubble _____ Boulders _____ Bedrock _____

8. Immediate Shore Cover (%): Denuded _____ Grasses 10 Shrubs 10 Trees 80

9. Degree of Shading at 12 noon (%) 80%

10. Aquatic Vegetation (% and type) none

11. Stream Cover at time of survey drift, snags and undercut banks with tree roots

12. Stream Permanent Or Intermittent _____

13. Remarks: (pollution, natural food, flood marks, ice flow, springs, fishing intensity, dams, undercut banks, bank erosion, cattle grazing, fencing, condition of watershed, fish population, changes in stream habitat, cause of turbidity, prior fish kills, commercial fishing, angling, fish preserve, primary use).

(see remarks on reverse side)

(Continue remarks and draw map of station on reverse side)

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FM. 4.0 6/72

(49890-5M sets-4-73)



Survey crew: Ken Russell, Bob Williamson and Larry Smith of I.D.O.C and Don Roseboom and Rick Tvaitof the Illinois State Water Survey.

North Creek station #N-5, located 7.8 miles upstream from the stream's confluence with Court Creek, has a drainage area of approximately 6 square miles. The aquatic habitat is characterized by a streambed consisting of primarily sand and gravel with a small amount of silt and clay; unstable banks covered by a mixture of grasses, shrubs and trees; a high degree of channel sinuosity; short, high gradient pools of sufficient depth with a fair amount of instream cover of snags, brush and undercut tree roots and high gradient riffles composed of fine gravel with little rubble. No known fish kills have been reported at this site; however, several potential point and non-point sources of pollution exist in the drainage area. The village of Wataga is situated within the direct drainage. Highly fluctuating water levels are common, but not with the frequency at other sites further downstream having a greater drainage basin.

The 1980 fish collection revealed 15 species having a standing crop of 222.36 pounds per acre. Forage fish represented 67 percent of the collection by number but only 18 percent by weight. White sucker, considered to be a pollution-tolerant species, was the most abundant fish and represented 70 percent of the total standing crop weight. Game or sport fish species, consisting of largemouth bass, bluegill, green sunfish and yellow bullhead, comprised only 9 percent of the collection by weight.

The quality of the aquatic habitat at station N-5 of North Creek, as assessed by the observation of stream bed materials, bank stability, degree of channel sinuosity, instream cover, pool depth, riffle characteristics, fish biomass (standing crop) and fish species diversity, composition and densities was rated as fair or semi-degraded.

STREAM SURVEY

(Station Description)

County Knox

Location: T Copley R 3E S 30 NW 1/2

Location from Nearest Town 3 1/2 mi. east and 2 mi. south of Wata

Date August 26, 1980

Name of Stream East Branch of North Creek

Tributary Relationship North Creek Total Length of Stream 4.1 Total Length Channelized _____

Station No. N-6 Ownership: John Weber in 1980

Station Location: Upper _____ Middle X Lower _____

1. Time 12:45 PM Secchi Reading 30 inches Water Temp 24.5°C (76°F) Air Temp 81°F

2. Water Color Brown (light phytoplankton) Sky (Weather) clear pH 8.1 Total Alkalinity 10.2 ppm
249 ppm

3. Velocity (ft./sec.) 0.1 ft./sec. Max. Depth 2.7 Av. Depth 1.2

4. Water Level: Low _____ Normal X High _____ Flood _____

Max. Width 24 feet Min. Width 4 feet Av. Width 18 feet

5. Total Length of Station (Identify upper and lower boundaries) 200 feet (approximately 400 feet downstream from south boundary of Section 19 to upper limit of station)

6. No. Pools one No. Riffles one % Pools 95% % Riffles 5%

7. Bottom types (%): Silt (muck) 18 Sand 30 Gravel 50 Rubble 2 Boulders _____ Bedrock _____

8. Immediate Shore Cover (%): Denuded 25 Grasses 60 Shrubs 5 Trees 10

9. Degree of Shading at 12 noon (%) 20%

10. Aquatic Vegetation (% and type) leafy pondweed (three clumps)
arrowhead (2 plants)

11. Stream Cover at time of survey snags, undercut banks, rubble, aquatic vegetation and deep pool.

12. Stream Permanent yes Or Intermittent _____

13. Remarks: (pollution, natural food, flood marks, ice flow, springs, fishing intensity, dams, undercut banks, bank erosion, cattle grazing, fencing, condition of watershed, fish population, changes in stream habitat, cause of turbidity, prior fish kills, commercial fishing, angling, fish preserve, primary use).

(See remarks on reverse side)

(Continue remarks and draw map of station on reverse side)

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F.M. 4.0 6/72

(49890-5M sets 4-73) 1. ~~Survey~~ Survey crew: Ken Russell, Bob Williamson and Larry Smith of I.D.O.C. and Don Roseboom and Rich Twait of the Illinois State Water Survey.

Fish sampling Station #N-6 of the East Tributary of North Creek, located 1.9 miles upstream from the stream's confluence with North Creek, has a drainage area of - approximately 6.9 square miles. The aquatic habitat is characterized by a streambed consisting of gravel (50%), sand (30%), silt (18%) and rubble (2%); a channel having a moderate degree of sinuosity and instability; short, high gradient pools of sufficient depth; good instream cover consisting of pools, riffles, snags, undercut banks; rubble and aquatic vegetation (rooted and emergent plants); raw, unstable and unvegetated banks on the outside bends of the channel; and high gradient riffles consisting of coarse gravel and limited rubble. Fish kills, resulting from discharges of livestock wastes, have been recorded within this section of stream. Highly fluctuating water levels occur at this site.

The 1980 fish collection revealed 20 species having a standing crop of 238.54 pounds per acre. Forage fish represented 94 percent of the collection by number and 57 percent by weight. Black and yellow bullhead comprised 78 percent of the sport fishery by number and 91 percent by weight. Several black bullhead were of catchable sizes. Pollution susceptible species such as the suckermouth minnow and orange-throated darter were collected, but in very low numbers. Bluntnose minnow, a pollution tolerant species, was the most abundant fish collected.

The quality of the aquatic habitat at station #N-6 of the East Tributary of North Creek, as assessed by the observation of streambed materials and stability; bank stability; degree of channel sinuosity; instream cover; pool depth; riffle characteristics; fish biomass (standing crop); species diversity and fish composition and density, was rated as good or balanced.

STREAM SURVEY

(Station Description)

County Knox

Location: T Sparta R 2E S 34 NE $\frac{1}{2}$ of NE $\frac{1}{2}$

Location from
Nearest Town 2 $\frac{1}{2}$ mi. south and 1 $\frac{1}{2}$ mi. east of Watag

Date August 13, 1980

Name of Stream West Branch of North Creek

Tributary Relationship North Creek Total Length of Stream 4.2 Total Length Channelized _____

Station No. N-7 Ownership: Esther Libby in 1980

Station Location: Upper _____ Middle S Lower _____

1. Time 2 pm Secchi Reading _____ Water Temp 30°C (86°F) Air Temp 86°F

2. Water Color brown Sky (Weather) clear pH 8.3 D.O. - 10.1 ppm
Total Alkalinity 273 ppm

3. Velocity (ft./sec.) 0.1 ft./sec. Max. Depth 0.5 feet Av. Depth 0.3 feet

4. Water Level: Low X Normal _____ High _____ Flood _____

Max. Width 8 feet Min. Width 2 feet Av. Width 6 feet

5. Total Length of Station (Identify upper and lower boundaries) 150 feet (upper limit of station area starts
200 feet downstream from old township bridge)

6. No. Pools 2 No. Riffles 2 % Pools 80 % Riffles 20

7. Bottom types (%): Silt (muck) 30 Sand 50 Gravel 20 Rubble _____ Boulders _____ Bedrock _____

8. Immediate Shore Cover (%): Denuded 10 Grasses 90 Shrubs _____ Trees _____

9. Degree of Shading at 12 noon (%) no shading at high noon

10. Aquatic Vegetation (% and type) Leafy pondweed (one clump)

11. Stream Cover at time of survey limited - overhanging grasses, pondweed and riffles.

12. Stream Permanent yes Or Intermittent _____

13. Remarks: (pollution, natural food, flood marks, ice flow, springs, fishing intensity, dams, undercut banks, bank erosion, cattle grazing, fencing, condition of watershed, fish population, changes in stream habitat, cause of turbidity, prior fish kills, commercial fishing, angling, fish preserve, primary use).

(see remarks on reverse)

(Continue remarks and draw map of station on reverse side)

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F.M. 4.0 6/72

(49990-5M sets-4-73) 14

Survey Crew: Ken Russell, Don Sallee and Larry Smith of I.D.O.C. and Don Roseboom and Rick Twait of the Illinois State Water Survey.

Fish sampling station #N-7 of the West tributary of North Creek, located 2.1 miles upstream from the stream's confluence with North Creek, has a drainage area of approximately 3.4 square miles. The aquatic habitat is characterized by a streambed consisting of sand (50%), silt (30%) and gravel (20%); a channel having a moderate degree of sinuosity and instability; short, high gradient pools of shallow depth; a lack of instream cover; unstable and eroding banks on the outside bends of the channel; and high gradient riffles consisting of a mixture of gravel sizes. An improved habitat can be described at various sites downstream from the fish sampling site summarized above. Due to the high percentage of cropland within the drainage area, this site has a rapid raise in water level following extensive rainfall. Fish kills, resulting from discharges of livestock wastes (confinement operations) have been known to occur at this site; in fact, during the survey a fish kill was in progress immediately downstream from the sampling area.

The 1980 fish collection revealed 13 species having a standing crop of 333.81 pounds per acre. Forage fish represented 90 percent of the collection. Commercial species were not collected; however, white sucker, quillback and golden redbreast have been collected prior to this survey at a downstream location. Black bullhead comprised 97 percent of the sport fishery by weight, illustrating an aquatic habitat degraded by low dissolved oxygen levels. The southern redbelly dace (a pollution susceptible species) was collected, but in very low numbers. Stoneroller, a herbivorous feeder, was the most abundant fish collected. Species diversity was low (13) compared to other similar sized sampling sites in the Court Creek drainage basin.

The quality of the aquatic habitat at station #N-7 of the West Tributary of North Creek, as assessed by the observation of streambed materials and stability; bank stability; degree of channel sinuosity, instream cover; pool depth; riffle characteristics; fish biomass (standing crop); species diversity and fish composition and density, was rated as fair or semi-degraded.

STREAM SURVEY

(Station Description)

County Knox

Location: T Knox R 2E S 13 NW 1/4 of SE

Location from Nearest Town 3.5 miles northeast of Knoxville

Date August 25, 1980

Name of Stream Middle Creek

Tributary Relationship Court Creek Total Length of Stream 9.9 miles Total Length Channelized _____

Station No. M-1 Ownership: Donald Throwbridge

Station Location: Upper _____ Middle _____ Lower XX

1. Time 8:45 AM Secchi Reading 8 inches (silt) Water Temp 19.9°C Air Temp 80°F

2. Water Color brown Sky (Weather) clear pH 7.9 D.O. - 6.7 ppm Total Alkalinity 242 ppm

3. Velocity (ft./sec.) 0.4 ft./sec. Max. Depth 2.0 feet Av. Depth 0.7 feet

4. Water Level: Low _____ Normal X High _____ Flood _____

Max. Width 10 feet Min. Width 4 feet Av. Width 6 feet

5. Total Length of Station (Identify upper and lower boundaries) 200 feet (lower station limit is approximately 600 feet upstream from new township bridge)

6. No. Pools 4 No. Riffles 4 % Pools 60 % Riffles 40

7. Bottom types (%): Silt (muck) 10 Sand 50 Gravel 40 Rubble _____ Boulders _____ Bedrock _____

8. Immediate Shore Cover (%): Denuded _____ Grasses 85 Shrubs 5 Trees 10

9. Degree of Shading at 12 noon (%) 20 percent

10. Aquatic Vegetation (% and type) none


11. Stream Cover at time of survey Snags, brush, riffles and overhanging grasses.

12. Stream Permanent yes Or Intermittent _____

13. Remarks: (pollution, natural food, flood marks, ice flow, springs, fishing intensity, dams, undercut banks, bank erosion, cattle grazing, fencing, condition of watershed, fish population, changes in stream habitat, cause of turbidity, prior fish kills, commercial fishing, angling, fish preserve, primary use).

(See remarks on reverse side)

(Continue remarks and draw map of station on reverse side)
Page 1 of 2 Pages
F.M. 4.0 6/72

(49090-5M sets-4-73)  Survey crew: Ken Russell, Bob Williamson and Larry Smith of I.D.O.C. and Don Roseboom and Rick Twait of Illinois State Water Survey.

Middle Creek Station #M-1, located 1.1 miles upstream from the stream's confluence with Court Creek, has a drainage area of approximately 9 square miles. The aquatic habitat is characterized by a streambed consisting of sand (50%), gravel (40%) and silt (10%); a narrow channel (4 to 10 feet) having a high degree of sinuosity; short, high gradient pools of sufficient depth; fair amounts of instream cover consisting of snags, brush, undercut tree roots and riffles; unstable banks vegetated by annual weeds and willows; and high gradient riffles composed of fine gravel. No fish kills have been reported for this site; however, several agricultural related pollution hazards exist in the watershed. Moderate to severe water level fluctuations occur at this site.

The 1980 fish collection revealed 19 species having a standing crop of 241 pounds per acre. Forage fish represented 93 percent of the collection by number and 82 percent by weight. Sport fish accounted for only 10 percent of the collection by weight. Harvestable sized sport fish were not collected. Pollution intolerant species such as the smallmouth bass and southern redbelly dace were collected, but in very low numbers. Bluntnose minnow, a pollution tolerant species, was the most abundant fish collected.

The quality of the aquatic habitat at station #M-1 of Middle Creek, as assessed by the observation of streambed materials and stability, bank stability, degree of channel sinuosity, instream cover, pool depth, riffle characteristics, fish biomass (standing crop), species diversity and fish composition and density, was rated as fair plus or semi-degraded.

STREAM SURVEY

(Station Description)

County Knox

Location: T Knox R 2E S 10 NE 1/4 of NE

Location from
Nearest Town 3 miles north of Knoxville

Date August 25, 1980

Name of Stream Middle Creek

Tributary Relationship Court Creek Total Length of Stream 9.9 miles Total Length Channelized _____

Station No. M-3 Ownership: Claude Ruddell

Station Location: Upper _____ Middle X Lower _____

1. Time 2:30 pm Secchi Reading 10 inches Water Temp 24.5°C (76°F) Air Temp 84°F

2. Water Color brown Sky (Weather) clear pH 8.1 D.O. - 4.2 ppm
Total Alkalinity 306 ppm

3. Velocity (ft./sec.) 0.1 Max. Depth 2.0 feet Av. Depth 1.3 feet

4. Water Level: Low _____ Normal X High _____ Flood _____

Max. Width 12 feet Min. Width 5 feet Av. Width 10 feet

5. Total Length of Station (Identify upper and lower boundaries) 200 feet (upper end of station starts 500 feet downstream from township bridge)

6. No. Pools 2 No. Riffles 1 % Pools 95 % Riffles 5

7. Bottom types (%): Silt (muck) 5 Sand 30 Gravel 60 Rubble 5 Boulders _____ Bedrock _____

8. Immediate Shore Cover (%): Denuded _____ Grasses 40 Shrubs 10 Trees 50

9. Degree of Shading at 12 noon (%) 85 percent

10. Aquatic Vegetation (% and type) none

11. Stream Cover at time of survey Riffles, snags, drift, undercut banks and roots

12. Stream Permanent yes Or Intermittent _____


13. Remarks: (pollution, natural food, flood marks, ice flow, springs, fishing intensity, dams, undercut banks, bank erosion, cattle grazing, fencing, condition of watershed, fish population, changes in stream habitat, cause of turbidity, prior fish kills, commercial fishing, angling, fish preserve, primary use).

(See remarks on reverse side)

(Continue remarks and draw map of station on reverse side)

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F M. 4.0 6/72

(49890-5M sets 4-73)  Survey crew: Ken Russell, Bob Williamson and Larry Smith of I.D.O.C. and Don Roseboom and Rick Twait of Illinois State Water Survey.

Middle Creek station #M-3, located 4.0 miles upstream from the stream's confluence with Court Creek, has a drainage area of approximately 6 square miles. The aquatic habitat is characterized by a streambed consisting of gravel (60%), sand (20%), silt (5%) and rubble (5%); a narrow channel (5 to 12 feet) having a low degree of sinuosity; short, high gradient pools of sufficient depth; good instream cover of snags, brush, undercut tree roots and large rubble; stable banks having many unvegetated areas due to excessive cattle grazing; and high gradient riffles composed of coarse gravel and rubble. No fish kills have been reported at this site; however, hog confinement operations within the immediate watershed may be impacting the fishery. The dissolved oxygen level was a low 4.2 ppm on the survey date. Moderate water level fluctuations occur at this site.

The 1980 fish collection revealed 19 species having a standing crop of 184.57 pounds per acre. Forage fish represented 86 percent of the collection by number and 52 percent by weight. Sport fish accounted for 31 percent of the collected weight, but only one 7.2 inch black bullhead was of a harvestable size. Pollution intolerant species such as the southern redbelly dace and, to a lesser degree, the suckermouth minnow and orangethroated darter (susceptible species) were collected in very low numbers indicating environmental instability.

The quality of the aquatic habitat at station #M-3 of Middle Creek, as assessed by the observation of streambed materials and stability, bank stability, degree of channel sinuosity, instream cover, pool depth, riffle characteristics, fish biomass (standing crop), species diversity and fish composition and density, was rated as fair or semi-degraded. Without having the organic pollution, the site would have been rated as balanced.

STREAM SURVEY
(Station Description)

County Knox

Location: T Sparta R 2E S 32 SW 1/2

Location from
Nearest Town 3 1/2 miles southwest of Wataga

Date August 13, 1980

Name of Stream Middle Creek

Tributary Relationship Court Creek Total Length of Stream 9.9 miles Total Length Channelized _____

Station No. M-5 Ownership: Swanson Seed Farm

Station Location: Upper Middle _____ Lower _____

1. Time 11 AM Secchi Reading too shallow Water Temp 22.5°C (72°F) Air Temp 79°F

2. Water Color gray-brown Sky (Weather) clear pH 8.3 D.O. - 7.8 ppm
Total Alkalinity 328 ppm

3. Velocity (ft./sec.) 0.1 ft/sec Max. Depth 0.8 feet Av. Depth 0.4 feet

4. Water Level: Low Normal _____ High _____ Flood _____

Max. Width 6 feet Min. Width 2 Av. Width 4 feet

5. Total Length of Station (Identify upper and lower boundaries) 150 feet (upper limit of station located approximately 1/4 mile south of township road)

6. No. Pools 2 No. Riffles 3 % Pools 30 % Riffles 60

7. Bottom types (%): Silt (muck) 70 Sand 20 Gravel 10 Rubble _____ Boulders _____ Bedrock _____

8. Immediate Shore Cover (%): Denuded 20 Grasses 20 Shrubs 20 Trees 40

9. Degree of Shading at 12 noon (%) 70 percent

10. Aquatic Vegetation (% and type) none

11. Stream Cover at time of survey Brush, drift and undercut tree roots


12. Stream Permanent yes Or Intermittent _____

13. Remarks: (pollution, natural food, flood marks, ice flow, springs, fishing intensity, dams, undercut banks, bank erosion, cattle grazing, fencing, condition of watershed, fish population, changes in stream habitat, cause of turbidity, prior fish kills, commercial fishing, angling, fish preserve, primary use).

(See remarks on reverse side)

(Continue remarks and draw map of station on reverse side)

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(49990-5M sets-4-73)  Survey crew: Ken Russell, Dan Sallee and Larry Smith of I.D.O.C. and Don Roseboom and Rick Twait of the Illinois State Water Survey.

Middle Creek station #M-5, located 8.6 miles upstream from the stream's confluence with Court Creek, has a drainage area of approximately 2 square miles. The aquatic habitat is characterized by a streambed consisting of silt (70%), sand (20%) and gravel (10%); a narrow channel (2 to 6 feet) having a high degree of sinuosity; short, high gradient pools of very shallow depth; good instream cover of snags, brush and undercut tree roots; low, stable banks having many unvegetated areas due to excessive cattle grazing; and high gradient riffles composed of fine gravel. No fish kills have been reported at this site; however, the downstream area is polluted from a nearby hog lot and does not support fish life. Moderate water level fluctuations occur at this site.

The 1980 fish collection revealed 11 species having a standing crop of 260.0 pounds per acre. Sport or commercial fish were not collected. Blunt-nose minnow, a pollution tolerant fish, was the most abundant species (39 percent of the collection); however, the southern redbelly dace (a pollution intolerant specie) was also collected in good numbers. Pollution susceptible species such as the orangethroated darter and suckermouth minnow were collected, but in very low density.

The quality of the aquatic habitat at station #M-5 of Middle Creek, as assessed by the observation of streambed materials and stability, bank stability, degree of channel sinuosity, instream cover, pool depth, riffle characteristics, fish biomass (standing crop), species diversity and fish composition and density, was rated slightly below fair or semi-degraded.

STREAM SURVEY
(Station Description)

County Knox

Location: T Persifer R 3E S 14 NW 1/4 of SE 1/4

Location from Nearest Town 1-3/4 miles northwest of Dahinda

Date August 11, 1980

Name of Stream Sugar Creek

Tributary Relationship Court Creek Total Length of Stream 4.5 miles Total Length Channelized _____

Station No. S-2 Ownership: Owned in 1980 by Roy Sargeant

Station Location: Upper _____ Middle _____ Lower X

1. Time 5.40 PM Secchi Reading 10 inches Water Temp 29.0°C (84°F) Air Temp 80°F

2. Water Color slightly brown Sky (Weather) clear pH 8.3 D.O. - 13.0 Total Alkalinity 160 ppm

3. Velocity (ft./sec.) 0.1 Max. Depth 30 inches Av. Depth 12 inches

4. Water Level: Low X Normal _____ High _____ Flood _____

Max. Width 20 feet Min. Width 12 feet Av. Width 16 feet

5. Total Length of Station (Identify upper and lower boundaries) 150 feet (upper limit starts approximately 200 feet downstream from iron township bridge)

6. No. Pools one No. Riffles _____ % Pools 100 % Riffles _____

7. Bottom types (%): Silt (muck) 25% Sand 60% Gravel 15% Rubble _____ Boulders _____ Bedrock _____

8. Immediate Shore Cover (%): Denuded _____ Grasses 25% Shrubs 5% Trees 70%

9. Degree of Shading at 12 noon (%) _____

10. Aquatic Vegetation (% and type) Filamentous algae, leafy pondweed and elodea were observed growing in riffle just above station.

11. Stream Cover at time of survey Undercut bank, logs and drift.

12. Stream Permanent Yes Or Intermittent _____

13. Remarks: (pollution, natural food, flood marks, ice flow, springs, fishing intensity, dams, undercut banks, bank erosion, cattle grazing, fencing, condition of watershed, fish population, changes in stream habitat, cause of turbidity, prior fish kills, commercial fishing, angling, fish preserve, primary use).

(See remarks on reverse side)

(Continue remarks and draw map of station on reverse side)
Page 1 of 2 Pages
F.M. 4.0 6/72

(49890-5M sts-4-73)14 ~~49890~~ Survey crew: Ken Russell, Bob Williamson and Larry Smith of I.D.O.C. and Don Roseboom and Rick Twait of Illinois State Water Survey.

Sugar Creek station #S-2, located an equal distance (1.05 mi. each direction) between the stream's confluence with Court Creek and the spillway of Spoon Lake, has a drainage area of approximately 22 square miles. The drainage is highly diversified and contains nearly 4,000 acres of rugged pre-law (prior to 1962) strip-mine lands, intensive agricultural development in grain and livestock production and Spoon Lake and its surrounding residential development. The aquatic habitat is characterized by a streambed consisting of high percentages of sand (60%) and silt (25%); unstable, raw banks on the outside bends of the channel; a low degree of channel sinuosity; long, low gradient pools of shallow depth having sparse instream cover; and low gradient riffles consisting of fine gravel. Fish kills, resulting from discharges of confinement livestock wastes, have been known to occur within this section of Sugar Creek. Water levels fluctuate widely with annual frequency.

The 1980 fish collection revealed 16 species having a standing crop of 340.55 pounds per acre. The standing crop calculated for this station is misleading due to the rationale that the three large carp (spillway loss from Spoon Lake just above the station) included in the collection were not the product of the sampling area and therefore the figures misrepresent the stream's productivity. Without the three large carp included in the collection, the standing crop would have been 193.27 pounds per acre. Forage fish density was very low (11 percent of the collection) due to predation from an extremely high (80 percent of the collection) population of sport fish. Bluegill and black bullhead dominated the sport fishery with 83 percent of the collection; however, none were of catchable or useable sizes. Species diversity and density was low at this sampling site.

The quality of the aquatic habitat at station #S-2 of Sugar Creek, as assessed , by the observation of streambed materials and stability, bank stability, degree of channel sinuosity, instream cover, pool depth, riffle characteristics, fish biomass (standing crop), species diversity and fish composition and density, was rated slightly below fair or semi-degraded.

STREAM SURVEY
(Station Description)

County Knox

Location: T Copley R 3E S 27 SE½

Location from
Nearest Town 3 miles southwest of Victoria

Date August 11, 1980

Name of Stream Sugar Creek

Tributary Relationship Court Creek Total Length of Stream 4.5 miles Total Length Channelized _____

Station No. S-5 ownership John Seiboldt

Station Location: Upper X Middle _____ Lower _____

1. Time 2:10 P.M. Secchi Reading 4 inches (silt) Water Temp 23.2°C (74°F) Air Temp 75°F
D.O. -less than 0.1 p

2. Water Color brown (suspended silt) Sky (Weather) overcast pH 7.3 Total Alkalinity 84 ppm

3. Velocity (ft./sec.) none (no flow) Max. Depth 12 inches Av. Depth 5 inches

4. Water Level: Low X (no flow) Normal _____ High _____ Flood _____

Max. Width 10 feet Min. Width 6 feet Av. Width 8 feet

5. Total Length of Station (Identify upper and lower boundaries) 150 feet (lower limit of station located approximately 2,000 feet upstream from Freemont Road bridge)

6. No. Pools 4 No. Riffles _____ % Pools 100% % Riffles _____

7. Bottom types (%): Silt (muck) 30 Sand 60 Gravel 10 Rubble _____ Boulders _____ Bedrock _____

8. Immediate Shore Cover (%): Denuded 60 Grasses 30 Shrubs _____ Trees 10

9. Degree of Shading at 12 noon (%) 95%

10. Aquatic Vegetation (% and type) none

11. Stream Cover at time of survey None at time of survey due to low water; however, during normal water level the stream has undercut banks, snags and brush.


12. Stream Permanent _____ Or Intermittent Yes

13. Remarks: (pollution, natural food, flood marks, ice flow, springs, fishing intensity, dams, undercut banks, bank erosion, cattle grazing, fencing, condition of watershed, fish population, changes in stream habitat, cause of turbidity, prior fish kills, commercial fishing, angling, fish preserve, primary use).

(See remarks on reverse side)

(Continue remarks and draw map of station on reverse side)
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(49990-5M sets-4-73) 14 

Survey crew: Ken Russell, Dan Sallee and Larry Smith of the I.D.O.C.
and Don Roseboom and Rick Twait of the Illinois State Water Survey.

Sugar Creek station #S-5, located one mile upstream from the stream's confluence with Spoon Lake, has a drainage area of approximately 6.7 square miles containing strip mine, timber, pasture and rowcrop lands. Roundhouse and Windsor Lakes are situated within the immediate drainage. Due to "a mid-summer drought, the stream was not flowing on the present survey date. Four small pools contained within the 150 foot station limits were sampled with rotenone (fish toxicant) and found to be void of fish life. Dissolved oxygen levels in these pools were 0.1 ppm; too low for sustaining fish life. During normal flow conditions, the stream is speculated to contain a high density of small minnow species. The natural character of the stream has been greatly degraded within the sampling station area due to excessive cattle grazing. The aquatic habitat, during normal water flow conditions, is characterized by an irregular stream bed consisting of equal amounts of silt, sand and gravel with some visible rubble; denuded banks having a high degree of young tree growth; shallow pools containing some instream cover of snags, brush and undercut tree roots and high gradient riffles composed of fine gravel. Highly fluctuating water levels are rare at this site due to the numerous impoundments and high percentage of uncultivated lands in the drainage.

The quality of the aquatic habitat was rated as poor or degraded at this site due to intensive cattle grazing.

STREAM SURVEY — FISH COLLECTION

14. Minnow seine haul taken: Yes _____ No X Number _____

15. Area sampled: Total length (ft.) 300 Average width (ft.) 20

Surface acres .137 Average depth (ft.) 1.0 Acre feet .137

Toxicant: Type Rotenone Gallons .09 Concentration 5% Dosage Rate 2ppm

Potassium permanganate: Pounds used 1.5 lbs.

Blocking seine: Mesh size: 1/4"

Electro fishing none Time _____


16. Fish Collection Stream Court Creek Station No. C-3

Species	Total Number	Total Weight	Size Range (Inches)	Size Groups		
				Total No.	Total Wgt.	Average Length
Smallmouth bass	8	.05	2.0 to 2.5	8	.05	2.4 inch
Largemouth bass	22	1.28	3.0 to 4.5	16	.25	3.5 inch
"			6.5 to 7.0	6	1.03	6.7 inch
Bluegill	29	1.27	3.0 to 4.0	26	.62	3.5 inch
"			6.5 to 7.0	3	.65	6.9 inch
Green Sunfish	19	.52	2.5 to 4.0	19	.52	3.0 inch
Hybrid Sunfish						
(Blue & Green)	2	.10	3.5 to 4.5	2	.10	4.0 inch
Channel catfish	11	.24	1.5 to 2.0	10	.04	1.9 inch
"			6.5	1	.20	6.5 inch
Yellow bullhead	12	.02	1.5 to 2.0	12	.04	1.8 inch
Stone cat	7	.15	2.0	5	.01	2.0 inch
"			5.5	2	.14	5.5 inch
Quillback	33	2.25	1.5 to 2.5	10	.06	2.0 inch
"			5.5 to 7.0	23	2.19	6.0 inch
Golden redhorse	9	.405	1.5	1	.005	1.5 inch
			4.5 to 6.0	8	.40	5.0 inch

(Continued on Reverse side)

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Species	Total Number	Total Weight	Size Range (Inches)	Size Groups		
				Total No.	Total Wgt.	Average Length
Creek Chub	23	.75	2.0 to 3.5	10	.05	2.5 inch
"			4.5 to 6.5	12	.70	5.5 inch
Hornyhead chub	35	1.035	1.5	8	.005	1.5 inch
"			3.5 to 5.5	27	1.03	5.0 inch
Stoneroller	107	.32	1.0 to 3.0	101	.22	2.2 inch
"			3.5 to 4.0	6	.10	3.5 inch
Bluntnose minnow	928	1.49	1.0 to 3.0	928	1.49	2.0 inch
Fathead minnow	3	.002	1.0	3	.002	1.0 inch
Suckermouth minnow	3	.007	1.5 to 2.5	3	.007	2.0 inch
Red shiner	360	.82	1.0 to 3.0	360	.82	1.9 inch
Striped shiner	9	.394	2.5	1	.004	2.5 inch
"			3.5 to 6.0	8	.39	5.0 inch
Bigmouth shiner	134	.30	0.5 to 1.5	51	.03	1.0 inch
"			1.5 to 3.0	83	.27	2.2 inch
Sand shiner	769	1.96	0.5 to 2.5	281	.15	1.0 inch
"			1.5 to 2.5	488	1.81	2.2 inch
Emerald shiner	116	.35	1.5 to 3.5	116	.35	2.5 inch
Johny darter	7	.02	1.5 to 2.0	7	.02	1.9 inch

17. Composition

	Number		Weight	
	Number	Percent	Pounds	Percent
Game	103	3.89	3.480	25.34
Commercial	42	1.59	2.655	19.33
Forage	2,501	94.52	7.598	55.33
TOTAL	2,646	100.00	13.733	100.00

18. Pounds of fish per acre: 100.24

Number of species 22

19. Date of Report 2-13-81 Biologist: Ken Russell

Copies to: District, Area and Central Offices.

STREAM SURVEY — FISH COLLECTION

14. Minnow seine haul taken: Yes _____ No X Number _____

15. Area sampled: Total length (ft.) 300 Average width (ft.) 28

Surface acres .193 Average depth (ft.) 1.5 Acre feet .289

Toxicant: Type Rotenone Gallons .189 Concentration 5% Dosage Rate 2 ppm

Potassium permanganate: Pounds used 3.2 lbs.

Blocking seine: Mesh size: 1/4"

Electro fishing none Time _____


16. Fish Collection Stream Court Creek (middle section) Station No. C-6

Species	Total Number	Total Weight	Size Range (Inches)	Size Groups		
				Total No.	Total Wgt.	Average Length
Smallmouth bass	87	9.65	2.0 to 3.0	76	.114	2.5 inches
"			6.0 to 9.5	6	1.79	8.0 inches
"			11.0 to 13.0	2	1.70	12.0 inches
"			15.0 to 15.5	2	3.02	15.3 inches
"			17.5	1	2.70	17.5 inches
Largemouth bass	10	.91	4.0 to 5.0	7	.39	4.5 inches
"			6.5 to 7.0	3	.52	6.8 inches
Bluegill	15	.38	2.5 to 4.0	15	.38	3.5 inches
Green sunfish	11	.38	2.5 to 4.0	11	.38	3.5 inches
Channel catfish	9	.968	1.9 to 2.2	3	.008	2.0 inches
"			7.4 to 7.6	4	.42	7.5 inches
"			9.8 to 10.3	2	.54	10.0 inches
Yellow bullhead	38	.87	1.5 to 3.0	31	.15	2.5 inches
"			6.0 to 7.5	7	.72	6.5 inches
Stonecat	26	.67	1.3 to 1.7	14	.08	1.5 inches
"			3.4 to 3.7	3	.04	3.5 inches
"			5.0 to 7.0	9	.55	5.5 inches

(Continued on Reverse side)

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(49990—5M Sets—4-73) 14 

Species	Total Number	Total Weight	Size Range (Inches)	Size Groups		
				Total No.	Total Wgt.	Average Length
Quillback	40	12.14	5.5 to 7.5	24	2.21	6.5 inches
"			8.0 to 10.0	4	1.50	9.5 inches
"			10.5 to 13.5	12	8.43	11.5 inches
River Carpsucker	14	8.69	10.5 to 12.0	14	8.69	11.0 inches
Carp	3	9.84	10.5	1	.60	10.5 inches
"			19.0	1	3.79	19.0 inches
"			22.0	1	5.45	22.0 inches
Golden redbreast	76	8.75	4.5 to 6.0	63	2.94	5.0 inches
"			8.0 to 8.5	6	1.25	8.3 inches
"			10.0 to 11.5	6	3.04	11.0 inches
"			16.5	1	1.52	16.5 inches
Wt. Sucker	2	.19	5.0 to 7.0	2	.19	6.0 inches
Creek Chub	31	.28	1.4 to 1.7	16	.08	1.5 inches
"			3.5 to 5.5	15	.20	4.0 inches
Hornyhead Club	24	.20	1.4 to 1.7	13	.04	1.5 inches
"			3.5 to 5.0	11	.16	4.0 inches
Stoneroller	37	.18	1.5 to 2.5	33	.11	2.0 inches
			3.0 to 3.5	4	.07	3.3 inches
(additional fish data on separate sheet)						

17. Composition

	Number		Weight	
	Number	Percent	Pounds	Percent
Game	170	6.5	13.158	22.5
Commercial	135	5.2	39.610	67.8
Forage	2,302	88.3	5.659	9.7
TOTAL	2,607	100.0	58.427	100.0

18. Pounds of fish per. acre: 302.73

Number of species 23

19. Date of Report February 13, 1981 Biologist: Ken Russell

Copies to: District, Area and Central Offices.

SPECIES	TOTAL NUMBER	TOTAL WEIGHT	SIZE GROUPS			
			SIZE RANGE (INCHES)	TOTAL NUMBER	TOTAL WEIGHT	AVERAGE LENGTH
Bluntnose minnow	1963	.90	0.8 to 1.5	1824	.49	1.0 inch
"			1.5 to 2.5	139	.41	2.0 inch
Red shiner	93	.31	1.0 to 2.5	93	.31	2.0 inch
Striped shiner	56	3.01	3.5 to 4.0	29	.52	3.8 inch
"			4.5 to 6.0	27	1.49	5.5 inch
Bigmouth shiner	3	.005	2.0	3	.008	2.0 inch
Sand shiner	59	.08	0.5 to 1.2	38	.01	0.9 inch
"			1.5 to 2.5	21	.07	2.0 inch
Logperch	1	.006	3.0	1	.006	3.0 inch
Johnny darter	6	.01	1.5 to 2.0	6	.01	1.9 inch
Orangethroat darter	3	.008	1.5 to 2.0	3	.008	1.8 inch

STREAM SURVEY — FISH COLLECTION

14. Minnow seine haul taken: Yes _____ No X Number _____

15. Area sampled: Total length (ft.) 150 Average width (ft.) 13

Surface acres 0.044 Average depth (ft.) 1.0 Acre feet 0.044

Toxicant: Type Rotenone Gallons 0.03 Concentration 5% Dosage Rate 2.0 ppm

Potassium permanganate: Pounds used 0.4

Blocking seine: Mesh size: 1/4 inch

Electro fishing none Time _____


16. Fish Collection Stream Court Creek Station No. C-12

Species	Total Number	Total Weight	Size Range (Inches)	Size Groups		
				Total No.	Total Wgt.	Average Length
Largemouth bass	4	.04	2.5 to 3.5	4	.04	2.8 inch
Green sunfish	107	1.56	1.0 to 1.5	37	.06	1.8 inch
"			2.0 to 4.0	65	.93	3.0 inch
"			5.0 to 7.0	5	.57	5.5 inch
Yellow bullhead	19	.34	2.0 to 2.5	15	.08	2.2 inch
"			5.0 to 5.5	4	.26	5.3 inch
Golden Redhorse	1	.04	5.5	1	.04	5.5 inch
White sucker	19	1.40	5.0 to 6.5	18	1.22	6.3 inch
"			8.0	1	.18	8.0 inch
Creek chub	74	2.04	2.5 to 3.5	24	.30	3.0 inch
"			4.0 to 5.5	43	1.12	5.0 inch
"			6.0 to 6.5	7	.62	6.3 inch
Horneyhead chub	52	.80	2.5 to 4.0	47	.48	3.0 inch
"			5.0 to 5.5	5	.32	5.2 inch
Stoneroller	186	2.73	2.0 to 4.5	186	2.73	3.5 inch
Bluntnose minnow	46	.31	2.0 to 3.0	46	.31	2.8 inch
Fathead minnow	2	.02	2.5 to 3.5	2	.02	3.0 inch

(Continued on Reverse side)

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STREAM SURVEY — FISH COLLECTION

14. Minnow seine haul taken: Yes _____ No _____ Number _____

15. Area sampled: Total length (ft.) 200 Average width (ft.) 16

Surface acres .073 Average depth (ft.) 2.0 Acre feet .146

Toxicant: Type Rotenone Gallons .095 (12 oz) Concentration 5% Dosage Rate 2 ppm

Potassium permanganate: Pounds used 1.52 lbs.

Blocking seine: Mesh size: 1/2" mesh

Electro fishing No Time _____


16. Fish Collection Stream North Creek Station No. N-2

Species	Total Number	Total Weight	Size Range (Inches)	Size Groups		
				Total No.	Total Wgt.	Average Length
Largemouth bass	8	1.14	4.0 to 4.5	2	.06	4.3 inch
"			5.9 to 8.2	6	1.08	7.2 inch
Bluegill	26	.48	2.9 to 4.3	26	.48	3.5 inch
Green sunfish	9	.24	1.2 to 4.4	9	.24	3.3 inch
Black bullhead	2	.14	4.5 to 5.7	2	.14	5.2 inch
Yellow bullhead	23	.79	1.8 to 2.7	13	.04	2.3 inch
"			4.8 to 6.2	10	.75	5.5 inch
Stonecat	2	.15	5.7 to 6.3	2	.15	6.0 inch
Quillback	13	1.21	5.6 to 7.0	13	1.21	5.8 inch
Carp	1	.29	8.3	1	.29	8.3 inch
Golden redhorse	20	.97	4.4 to 5.8	20	.97	5.2 inch
Shorthead redhorse	5	.41	6.1 to 6.2	5	.41	6.2 inch
White sucker	15	1.66	4.6 to 6.9	11	.74	5.7 inch
"			7.6 to 10.0	4	.92	7.9 inch
Creek chub	32	1.26	1.8 to 2.0	13	.04	1.9 inch
"			3.1 to 5.8	11	.37	5.0 inch
"			5.9 to 7.5	8	.85	6.3 inch

(Continued on Reverse side)

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(49990—5M Sets—4-73) 14 

Species	Total Number	Total Weight	Size Range (Inches)	Size Groups		
				Total No.	Total Wgt.	Average Length
Hornyhead chub	19	.38	1.5	7	.02	1.5 inch
"			4.0 to 5.3	12	.36	5.0 inch
Stoneroller	21	.17	1.6 to 1.9	14	.02	1.7 inch
"			3.7 to 4.5	7	.15	3.8 inch
Bluntnose minnow	213	.53	0.8 to 2.7	213	.53	1.7 inch
Red shiner	93	.24	0.8 to 2.3	93	.24	1.8 inch
Striped shiner	15	.44	3.2 to 5.8	15	.44	4.3 inch
Bigmouth shiner	44	.10	0.8 to 2.4	44	.10	1.5 inch
Sand shiner	60	.14	0.9 to 2.2	60	.14	1.4 inch
Johny darter	3	.01	1.7	3	.01	1.7 inch
Orangethroated darter	4	.01	1.4 to 1.7	4	.01	1.5 inch

17. Composition

	Number		Weight	
	Number	Percent	Pounds	Percent
Game	68	10.83	2.79	25.93
Commercial	54	8.60	4.54	42.19
Forage	506	80.57	3.43	31.88
TOTAL	628	100.00	10.76	100.00

18. Pounds of fish per acre: 147.40 Number of species 21

19. Date of Report _____ Biologist: Ken Russell

Copies to: District, Area and Central Offices.

STREAM SURVEY — FISH COLLECTION

14. Minnow seine haul taken: Yes _____ No X Number _____

15. Area sampled: Total length (ft.) 250 Average width (ft.) 20

Surface acres 0.12 Average depth (ft.) 1.4 Acre feet .168

Toxicant: Type Rotenone Gallons .110 (14 oz.) Concentration 5% Dosage Rate 2 ppm

Potassium permanganate: Pounds used 1.76 lbs

Blocking seine: Mesh size: 1/2" mesh

Electro fishing Back-pack shocker (13.5 min) Time 5 pm


16. Fish Collection Stream North Creek Station No. N-3

Species	Total Number	Total Weight	Size Range (Inches)	Size Groups		
				Total No.	Total Wgt.	Average Length
Largemouth bass	8	.48	3.9 to 5.2	6	.15	4.5 inch
"			6.6 to 7.6	2	.33	7.0 inch
Green sunfish	25	.71	1.1 to 1.5	2	.01	1.3 inch
"			2.9 to 4.2	23	.70	4.0 inch
Bluegill	21	.27	2.5 to 3.6	21	.27	3.0 inch
Orangespotted sunfish	1	.01	3.0	1	.01	3.0 inch
Black bullhead	34	1.51	1.9 to 3.5	18	.11	2.5 inch
"			4.5 to 7.5	16	1.40	5.8 inch
Yellow bullhead	71	4.40	1.4 to 3.2	34	.22	2.0 inch
"			4.6 to 5.3	24	1.65	5.0 inch
"			6.5 to 8.0	13	2.53	6.8 inch
Stonecat	8	.41	1.8 to 2.3	2	.01	2.0 inch
"			4.9 to 6.7	6	.40	5.8 inch
Freckled madtom	1	.02	3.5	1	.02	3.5 inch
Quillback	13	.85	3.3 to 3.5	2	.04	3.4 inch
"			5.7 to 5.8	11	.81	5.8 inch
Golden redhorse	19	.80	4.5 to 6.0	19	.80	5.0 inch
Shorthead redhorse	1	.11	6.0	1	.11	6.0 inch
Carp	1	1.24	13.3	1	1.24	13.3 inch

(Continued on Reverse side)

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F.M. 4.0 6/72

(49990-5M Sets-4-73) 14 

Species	Total Number	Total Weight	Size Range (inches)	Size Groups		
				Total No.	Total Wgt.	Average Length
White sucker	28	1.60	2.6	1	.01	2.6 inch
"			4.7 to 5.6	25	1.00	5.3 inch
"			8.6 to 10.0	2	.59	9.2 inch
Creek chub	60	2.85	1.4 to 4.1	32	.64	2.8 inch
"			4.7 to 7.0	28	2.21	6.0 inch
Hornyhead chub	16	.29	3.2 to 5.0	16	.29	4.1 inch
Stoneroller	73	.36	1.5 to 3.8	73	.36	2.3 inch
Bluntnose minnow	87	.52	0.8 to 3.0	87	.52	2.5 inch
Fathead minnow	3	.02	1.1 to 1.5	3	.02	1.3 inch
Red shiner	30	.20	1.7 to 2.3	30	.20	2.1 inch
Striped shiner	27	.52	2.7 to 3.0	20	.29	2.8 inch
"			4.5 to 5.1	7	.23	4.8 inch
Bigmouth shiner	51	.24	1.0 to 2.6	51	.24	2.4 inch
Sand shiner	76	.30	0.9 to 2.5	76	.30	2.2 inch
Johny darter	8	.05	1.8 to 1.9	8	.05	1.8 inch
Orangethroated darter	5	.06	1.7 to 2.2	5	.06	2.0 inch

17. Composition

	Number		Weight	
	Number	Percent	Pounds	Percent
Game	160	23.99	7.38	41.41
Commercial	62	9.30	4.60	25.81
Forage	445	66.71	5.84	32.78
TOTAL	667	100.00	17.82	100.00

18. Pounds of fish per acre: 148.50 Number of species 24

19. Date of Report _____ Biologist: Ken Russell

STREAM SURVEY — FISH COLLECTION

14. Minnow seine haul taken: Yes _____ No Number _____

15. Area sampled: Total length (ft.) 150 Average width (ft.) 14

Surface acres .048 Average depth (ft.) 1.5 Acre feet .072

Toxicant: Type Rotenone Gallons .047 (6 oz) Concentration 5% Dosage Rate 2 ppm

Potassium permanganate: Pounds used 0.75 lbs.

Blocking seine: Mesh size: 1/4" mesh

Electro fishing none Time _____


16. Fish Collection Stream North Creek Station No. N-5

Species	Total Number	Total Weight	Size Range (Inches)	Size Groups		
				Total No.	Total Wgt.	Average Length
Largemouth bass	8	1.12	1.5 to 3.6	6	.04	2.0 inch
"			9.8 to 10.1	2	1.08	9.9 inch
Bluegill	14	.25	2.2 to 3.0	12	.10	2.5 inch
"			4.8 to 5.1	2	.15	4.9 inch
Green sunfish	2	.11	4.1 to 4.9	2	.11	4.5 inch
Yellow bullhead	2	.01	2.0 to 2.2	2	.01	2.1 inch
Golden redhorse	1	.13	4.6 to 5.8	1	.13	5.2 inch
White sucker	84	11.56	3.7 to 4.7	14	.32	4.0 inch
"			5.4 to 8.0	50	4.39	7.0 inch
"			8.6 to 13.2	20	6.85	10.5 inch
Creek chub	46	1.73	1.5 to 2.8	23	.26	2.5 inch
"			3.4 to 6.0	18	.95	5.2 inch
"			6.4 to 7.4	5	.52	7.0 inch
Hornyhead chub	12	.21	1.2 to 2.6	4	.03	1.9 inch
"			3.2 to 4.0	8	.18	3.8 inch
Stoneroller	3	.06	2.8 to 4.0	3	.06	3.4 inch
Bluntnose minnow	73	.24	2.2 to 2.5	73	.24	2.4 inch

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STREAM SURVEY — FISH COLLECTION

14. Minnow seine haul taken: Yes _____ No X Number _____

15. Area sampled: Total length (ft.) 200 Average width (ft.) 18 feet

Surface acres .082 Average depth (ft.) 1.2 Acre feet .098

Toxicant: Type Rotenone Gallons .064 (8 oz) Concentration 2 1/2% Dosage Rate 2 ppm

Potassium permanganate: Pounds used 1.0 lb.

Blocking seine: Mesh size: 1/4 inch

Electro fishing none Time _____


16. Fish Collection Stream East Branch North Creek Station No. N-6

Species	Total Number	Total Weight	Size Range (Inches)	Size Groups		
				Total No.	Total Wgt.	Average Length
Largemouth bass	1	.07	4.8	1	.07	4.8 inches
Bluegill	7	.13	2.8 to 3.5	7	.13	3.2 inches
Green sunfish	7	.12	1.2 to 2.0	5	.02	1.7 inches
"			3.5 to 4.7	2	.10	4.2 inches
Black bullhead	40	2.62	0.7 to 1.3	8	.03	1.0 inches
"			3.8 to 4.7	11	.37	4.2 inches
"			4.9 to 6.5	16	1.21	5.5 inches
"			6.8 to 8.5	5	1.01	7.5 inches
Yellow bullhead	13	.78	2.1 to 3.4	6	.07	2.5 inches
"			5.4 to 6.7	7	.71	6.0 inches
Quillback	18	1.47	4.0 to 6.6	18	1.47	5.1 inches
Golden redhorse	6	.34	4.6 to 5.9	6	.34	5.5 inches
White sucker	63	2.80	4.3 to 7.0	63	2.80	5.3 inches
Creek chub	142	2.60	1.9 to 4.1	131	1.15	3.5 inches
"			4.2 to 6.5	11	.45	5.2 inches
Stoneroller	447	3.47	1.6 to 2.2	87	.26	1.8 inches
"			2.6 to 3.4	360	3.21	3.0 inches

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Species	Total Number	Total Weight	Size Range (Inches)	Size Groups		
				Total No.	Total Wgt.	Average Length
Hornyhead chub	7	.12	1.6 to 2.9	3	.02	2.2 inches
"			3.6 to 4.8	4	.10	4.2 inches
Suckermouth minnow	35	.25	1.7 to 3.8	35	.25	3.0 inches
Bluntnose minnow	1032	2.07	0.8 to 2.2	541	.70	1.7 inches
"			2.4 to 2.9	491	1.37	2.6 inches
Fathead minnow	64	.13	1.0 to 2.3	64	.13	1.7 inches
Bigmouth shiner	250	.75	1.4 to 2.6	250	.75	2.0 inches
Sand shiner	94	.28	1.2 to 2.7	94	.28	2.1 inches
Striped shiner	55	.99	1.3 to 3.9	55	.99	3.5 inches
Red shiner	134	.40	1.0 to 2.5	134	.40	2.1 inches
Johnny darter	52	.16	1.7 to 2.7	52	.16	2.2 inches
Orangethroated darter	3	.01	1.6	3	.01	1.6 inches

17. Composition

	Number		Weight	
	Number	Percent	Pounds	Percent
Game	68	2.75	3.72	19.02
Commercial	87	3.52	4.61	23.57
Forage	2315	93.73	11.23	57.41
TOTAL	2470	100.00	19.56	100.00

18. Pounds of fish per acre: 238.54 Number of species 20

19. Date of Report 1-19-81 Biologist: Ken Russell

Copies to: District, Area and Central Offices.

STREAM SURVEY — FISH COLLECTION

14. Minnow seine haul taken: Yes _____ No Number _____

15. Area sampled: Total length (ft.) 150 Average width (ft.) 8.5 set

Surface acres .0293 Average depth (ft.) 0.3 Acre feet .009

Toxicant: Type Rotenone Gallons .006(1 oz) Concentration 2½% Dosage Rate 4 ppm

Potassium permanganate: Pounds used 1/4 lb.

Blocking seine: Mesh size: 1/4" mesh

Electro fishing none Time _____

16. Fish Collection Stream West Branch of North Creek Station No. N-7

Species	Total Number	Total Weight	Size Range (Inches)	Size Groups		
				Total No.	Total Wgt.	Average Length
Green sunfish	3	.07	1.5 to 4.5	3	.07	3.0 inch
Black bullhead	66	2.68	1.2 to 2.0	2	.01	1.8 inch
"			3.5 to 4.5	38	1.01	4.0 inch
"			4.5 to 5.0	22	1.12	4.8 inch
"			5.5 to 7.0	4	.47	6.8 inch
Creek chub	138	1.13	0.9 to 2.9	111	.72	2.4 inch
"			3.0 to 3.8	27	.41	3.5 inch
Hornyhead chub	2	.02	2.5 to 4.0	2	.02	3.3 inch
Bluntnose minnow	18	.06	1.0 to 3.0	18	.06	2.5 inch
Fathead minnow	49	.18	1.0 to 2.5	49	.18	2.0 inch
Stoneroller	291	2.32	1.7 to 3.2	267	1.96	2.5 inch
"			3.5 to 4.0	24	.36	3.8 inch
Bigmouth shiner	119	.42	1.5 to 3.0	119	.42	2.5 inch
Sand shiner	4	.01	2.3 to 2.8	4	.01	2.5 inch
Golden shiner	2	.01	2.6 to 3.1	2	.01	3.0 inch
Southern redbelly dace	19	.06	2.0 to 2.5	19	.06	2.3 inch
Johnny darter	14	.04	1.8 to 2.7	14	.04	2.2 inch

STREAM SURVEY — FISH COLLECTION

14. Minnow seine haul taken: Yes _____ No Number _____

15. Area sampled: Total length (ft.) 200 Average width (ft.) 6

Surface acres .028 Average depth (ft.) 0.7 Acre feet .02

Toxicant: Type Rotenone Gallons .026 (3.2oz) Concentration 5% Dosage Rate 4 ppm

Potassium permanganate: Pounds used 0.83

Blocking seine: Mesh size: 1/4" mesh

Electro fishing Back-pack shocker (9 min.) Time 9:50 AM


16. Fish Collection Stream Middle Creek Station No. M-1

Species	Total Number	Total Weight	Size Range (Inches)	Size Groups		
				Total No.	Total Wgt.	Average Length
Smallmouth bass	6	.04	2.3 to 3.1	6	.04	2.9 inch
Bluegill	5	.04	2.7 to 3.3	5	.04	3.0 inch
Black bullhead	7	.14	2.1 to 4.1	7	.14	3.8 inch
Yellow bullhead	51	.48	2.3 to 3.2	48	.30	2.8 inch
"			4 to 5.8	3	.18	5.0 inch
Quillback	2	.02	2.5 to 2.7	2	.02	2.6 inch
White sucker	14	.47	2.9	1	.01	2.9 inch
"			4.4 to 6.0	13	.46	5.1 inch
Stoneroller	334	1.61	1.8 to 3.6	334	1.61	2.8 inch
Creek chub	156	2.13	2.3 to 3.8	129	1.27	3.0 inch
"			3.9 to 7.0	27	.86	4.6 inch
Hornyhead chub	12	.19	2.8 to 4.2	12	.19	3.5 inch
Bluntnose minnow	356	.66	1.0 to 1.5	228	.15	1.3 inch
"			2.1 to 2.8	128	.51	2.3 inch
Fathead minnow	7	.02	1.0 to 1.9	7	.02	1.5 inch
Suckermouth minnow	4	.02	2.1 to 3.5	4	.02	2.7 inch
Bigmouth shiner	219	.64	1.6 to 2.6	219	.64	2.0 inch

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Species	Total Number	Total Weight	Size Range (Inches)	Size Groups		
				Total No.	Total Wgt.	Average Length
Sand shiner	40	.16	2.2 to 2.4	40	.16	2.3 inch
Red shiner	13	.04	2.0 to 2.8	13	.04	2.5 inch
Striped shiner	3	.03	3.0 to 3.6	3	.03	3.3 inch
Southern redbelly dace	1	.01	2.4	1	.01	2.4 inch
Johnny darter	10	.03	1.7 to 2.4	10	.03	2.0 inch
Orangethroated darter	10	.02	1.5 to 1.8	10	.02	1.7 inch
Electrofishing data*: 12 species and 189 fish in 9 minutes.						
*(data included with rotenone inventory totals)						

17. Composition

	Number		Weight	
	Number	Percent	Pounds	Percent
Game	69	5.52	.70	10.37
Commercial	16	1.28	.49	7.26
Forage	1165	93.20	5.56	82.37
TOTAL	1250	100.00	6.75	100.00

18. Pounds of fish per acre: 241.07 Number of species 19

19. Date of Report 1-27-81 Biologist: Ken Russell

STREAM SURVEY — FISH COLLECTION

14. Minnow seine haul taken: Yes _____ No Number _____

15. Area sampled: Total length (ft.) 200 Average width (ft.) 10

Surface acres 046 Average depth (ft.) 1.3 Acre feet .06

Toxicant: Type Rotenone Gallons .04 gal (5 oz) Concentration 5% Dosage Rate 2 ppm

Potassium permanganate: Pounds used .64 lbs.

Blocking seine: Mesh size: 1/4" mesh

Electro fishing none Time _____


16. Fish Collection Stream Middle Creek Station No. M-3

Species	Total Number	Total Weight	Size Range (Inches)	Size Groups		
				Total No.	Total Wgt.	Average Length
Largemouth bass	1	.09	5.7	1	.09	5.7 inches
Bluegill	4	.10	3.0 to 3.6	4	.10	3.2 inches
Green sunfish	26	.33	0.6 to 1.2	14	.01	1.0 inches
"			3.0 to 4.1	12	.32	3.5 inches
Black bullhead	34	1.48	3.8 to 4.5	29	.80	4.2 inches
"			6.0 to 7.2	5	.68	6.5 inches
Yellow bullhead	13	.60	2.5 to 3.6	12	.50	3.2 inches
"			5.5	1	.10	5.5 inches
Golden redhorse	10	.40	4.1 to 5.2	10	.40	4.7 inches
White sucker	19	1.04	3.5 to 6.6	19	1.04	5.0 inches
Creek chub	99	1.94	0.9 to 3.2	38	.23	2.5 inches
"			3.4 to 7.0	61	1.71	5.1 inches
Stoneroller	64	.49	1.2 to 2.3	23	.04	1.8 inches
"			2.5 to 3.7	41	.45	3.2 inches
Hornyhead chub	18	.41	2.7 to 4.8	18	.41	4.0 inches
Suckermouth minnow	5	.03	1.6 to 2.1	4	.01	1.9 inches
"			3.6	1	.02	3.6 inches

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(49990—SM Sets—4-73) 14 

STREAM SURVEY — FISH COLLECTION

14. Minnow seine haul taken: Yes No Number 1

15. Area sampled: Total length (ft.) 150 Average width (ft.) 4 feet

Surface acres .014 Average depth (ft.) 0.4 Acre feet 0056

Toxicant: Type Rotenone Gallons .003(0.4oz) Concentration 5% Dosage Rate 2 ppm

Potassium permanganate: Pounds used .05 pounds

Blocking seine: Mesh size: 1/4 inch

Electro fishing none Time _____

16. Fish Collection Stream Middle Creek Station No. M-5

Species	Total Number	Total Weight	Size Range (Inches)	Size Groups		
				Total No.	Total Wgt.	Average Length
Stoneroller	162	.81	1.5 to 3.4	162	.81	2.8 inches
Creek Club	114	1.48	0.8 to 3.3	88	.83	3.0 inches
"			3.5 to 5.2	26	.65	4.5 inches
Hornyhead chub	18	.29	1.8 to 4.4	18	.29	3.5 inches
Bluntnose minnow	248	.74	0.8 to 2.5	248	.74	2.0 inches
Fathead minnow	10	.03	1.4 to 3.4	10	.03	2.0 inches
Suckermouth minnow	2	.01	2.0 to 2.8	2	.01	2.4 inches
Bigmouth shiner	26	.07	1.0 to 2.8	26	.07	1.9 inches
Red shiner	5	.02	1.5 to 2.5	5	.02	2.1 inches
Southern redbelly dace	39	.12	1.3 to 2.8	39	.12	2.4 inches
Johnny darter	13	.05	1.8 to 2.8	13	.05	2.4 inches
Orangethroated darter	7	.02	2.0 to 2.5	7	.02	2.2 inches

STREAM SURVEY — FISH COLLECTION

14. Minnow seine haul taken: Yes _____ No X Number _____

15. Area sampled: Total length (ft.) 150 Average width (ft.) 16.0 feet

Surface acres .055 Average depth (ft.) 1.0 feet Acre feet .055

Toxicant: Type Rotenone Gallons .036 (4.6oz) Concentration 5% Dosage Rate 2 ppm

Potassium permanganate: Pounds used 1/2 lb.

Blocking seine: Mesh size: 1/4 inch

Electro fishing none Time _____

16. Fish Collection Stream Sugar Creek Station No. S-2

Species	Total Number	Total Weight	Size Range (Inches)	Size Groups		
				Total No.	Total Wgt.	Average Length
Largemouth bass	10	2.54	2.5 to 3.0	5	.05	2.7 inches
"			6.0 to 8.0	2	.39	7.0 inches
"			9.5	1	.52	9.5 inches
"			10.8 to 11.2	2	1.58	11.0 inches
Bluegill	113	1.24	2.5 to 3.5	111	.95	3.0 inches
"			5.5 to 6.0	2	.29	5.8 inches
Green sunfish	4	.24	2.5 to 3.5	3	.08	3.0 inches
"			6.0	1	.16	6.0 inches
Yellow bullhead	18	1.66	1.5	2	.01	1.5 inches
"			5.0 to 7.0	15	1.29	6.0 inches
"			8.0	1	.36	8.0 inches
Black bullhead	38	1.88	4.0 to 5.5	38	1.88	5.0 inches
Quillback	7	.86	5.5 to 7.0	7	.86	6.5 inches
Carp	6	9.26	8.5 to 9.0	3	1.16	8.7 inches
"			14.5	1	1.42	14.5 inches
"			18.5	1	2.68	18.5 inches
"			22.5	1	4.00	22.5 inches

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