

APPENDIX A

**Topographic Controls on the Duration of Sinkhole Flooding in Central Tennessee, USA**

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KEY

ID – A unique identifier for each topographic depression.

Latitude and Longitude – Location of the centroid of each topographic depression.

Min. Days\* – Minimum number of days that the topographic depression was partially full of water.

Max. Days\* - Maximum number of days that the topographic depression was partially full of water.

Vol. (m<sup>3</sup>) – Volume of topographic depression in cubic meters.

Depth (m) – Maximum depth of topographic depression in meters.

Min. Elevation (m) – Minimum elevation of topographic depression in meters.

% slow – Percentage of topographic depression covered by slow permeability soils. Soils were grouped by permeability as shown in the tables below. See TN149 Metadata (2022) for more information.

PERMEABILITY	MUSYM	MUKEY
(Water)	W	528271
Moderate Permeability	Ar	528198
	CvB3	528220
	GRC	528229
	HcA	528236
	HcB	528237
	LoA	528242
	LoB	528243
	Ly	528244

PERMEABILITY	MUSYM	MUKEY
Slow Permeability	BrA	528204
	BrB	528205
	Eg	528228
	NeA	528251
	NeB	528252
	Ro	528254
	TaB2	528263
	TaC2	528264
	TbB3	528265
	TrC	528268
Tu	528269	

*\*Water bodies filled with water for 34 days are permanent and were not used in statistical analyses.*

ID	Latitude	Longitude	Min. Days	Max. Days	Vol. (m <sup>3</sup> )	Depth (m)	Min. Elev. (m)	% Slow
1	35.855751	-86.541172	27	33	9137.03	6.71	177.70	100
2	35.865846	-86.517732	11	15	5710.21	0.61	181.36	34
3	35.862757	-86.528479	2	10	141.77	0.30	185.62	0
4	35.860846	-86.519793	11	15	3952.00	4.27	177.70	84
5	35.858165	-86.556732	34	34	421.38	0.61	190.80	86
6	35.858038	-86.523981	11	15	743.66	0.30	182.88	17
7	35.857238	-86.534230	34	34	10121.88	2.13	181.66	41
8	35.857897	-86.531517	23	29	29823.60	3.35	180.14	23
9	35.855434	-86.525096	23	29	2393.86	1.22	182.27	100
10	35.855536	-86.523897	23	29	11618.23	2.13	181.66	100
11	35.855181	-86.525026	23	29	277.51	0.61	182.27	100
12	35.855477	-86.520294	21	22	52868.62	3.66	181.66	55
13	35.854011	-86.534903	34	34	11910.82	1.83	185.01	28
14	35.853581	-86.541183	34	34	1515.18	0.61	185.32	76
15	35.852047	-86.519828	11	15	1953.90	0.61	186.23	54
16	35.854325	-86.537788	27	33	30052.28	4.27	180.14	33
17	35.848623	-86.528680	2	10	1299.77	0.61	186.23	40
18	35.848931	-86.526676	21	22	29820.26	2.13	185.01	19
19	35.847966	-86.519764	16	20	310.08	0.30	186.54	27
20	35.848128	-86.521848	16	20	4718.74	0.91	186.54	10
21	35.846770	-86.548283	34	34	349.00	0.30	194.16	0
22	35.845710	-86.513029	2	10	184.59	0.30	188.67	100
23	35.844790	-86.526429	16	20	1334.12	0.30	186.54	0
24	35.844057	-86.521789	16	20	5710.83	0.91	187.15	100
25	35.843299	-86.521442	16	20	66.02	0.30	187.45	100
26	35.849045	-86.518772	21	22	475333.33	6.10	181.05	83
27	35.866397	-86.515071	23	29	32066.35	2.44	179.22	45
28	35.865964	-86.513869	23	29	8383.17	2.74	179.83	100
29	35.864946	-86.512916	23	29	2436.12	1.52	180.14	100
30	35.864732	-86.523331	23	29	5814.10	2.44	179.22	92
31	35.863843	-86.548641	2	10	3288.29	2.44	181.36	66
32	35.863906	-86.513526	23	29	61809.41	3.05	179.53	52
33	35.862871	-86.513168	21	22	2137.91	0.91	180.44	0
34	35.862245	-86.522243	16	20	9320.32	1.83	181.97	7
35	35.862027	-86.528034	11	15	2174.56	1.22	183.18	100
36	35.861905	-86.520057	21	22	1014.45	1.52	180.75	16
37	35.861965	-86.531292	16	20	1921.80	3.66	179.53	9
38	35.861465	-86.529362	11	15	5123.21	1.52	181.66	32
39	35.860491	-86.557827	16	20	8579.79	1.83	182.88	13

ID	Latitude	Longitude	Min. Days	Max. Days	Vol. (m <sup>3</sup> )	Depth (m)	Min. Elevation (m)	% slow
40	35.860074	-86.525311	2	10	633.93	2.13	180.44	100
41	35.859685	-86.525676	2	10	1011.60	0.91	181.66	100
42	35.859515	-86.516948	11	15	274.85	0.30	182.88	100
43	35.859363	-86.524675	11	15	378.02	0.30	182.27	3
44	35.859449	-86.516302	11	15	4347.00	7.01	175.87	0
45	35.859006	-86.517704	11	15	8854.66	5.49	177.70	100
46	35.858047	-86.522540	11	15	2588.86	0.61	182.58	0
47	35.857781	-86.538075	21	22	11896.60	2.74	181.97	72
48	35.856976	-86.524291	16	20	277.85	0.30	182.88	0
49	35.856362	-86.543255	11	15	783.84	1.52	182.58	36
50	35.860473	-86.541328	27	33	1148996.81	7.32	177.70	48
51	35.856799	-86.536511	16	20	19699.44	3.66	180.44	18
52	35.856340	-86.529129	11	15	191.84	0.30	182.88	100
53	35.855488	-86.522358	11	15	514.48	1.22	184.40	7
54	35.854190	-86.522400	30	33	2052.82	0.61	183.79	100
55	35.853443	-86.539755	2	10	1202.92	1.22	182.88	100
56	35.854370	-86.514217	2	10	23102.03	2.13	183.18	88
57	35.853436	-86.533038	16	20	3181.20	2.44	182.58	97
58	35.853215	-86.511643	2	10	23208.53	4.57	181.66	81
59	35.852498	-86.521943	16	20	1995.42	0.61	185.93	100
60	35.852708	-86.528469	23	29	161593.20	1.83	183.49	12
61	35.850312	-86.532857	16	20	10698.88	2.13	182.88	48
62	35.850055	-86.525221	11	15	802.06	0.91	185.62	9
63	35.847015	-86.528621	21	22	1595.45	0.61	185.93	62
64	35.844745	-86.515628	11	15	132.73	0.30	187.76	100
65	35.843554	-86.523265	11	15	124.07	0.30	187.45	100