

04212100 GRAND RIVER NEAR PAINESVILLE, OH

Southern Lake Erie Basin
Grand Subbasin

LOCATION.--Lat 41°43'08", long 81°13'41" referenced to North American Datum of 1927, Lake County, OH, Hydrologic Unit 04110004, on downstream left abutment of bridge on State Highway 84 (Walnut Avenue), 0.9 mi downstream from Big Creek in Painesville.

DRAINAGE AREA.--685 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 595.51 ft. NAVD1988. Prior to October 2012 datum of gage was 596.37 ft. NGVD 1929. Prior to October 1983 datum of gage published in error as 620.37 ft above sea level.

REMARKS.--Records are fair except for estimated daily discharges, which are poor. Water-quality data formerly collected at this site.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,500 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 30	1100	*19,500	*13.27
Nov 2	0500	8,130	8.98
Jan 30	1500	8,400	9.13
Jul 11	1730	7,410	8.58
Jul 20	0830	15,300	11.99

Minimum discharge, 28 ft³/s, Aug. 26, 27, gage height, 1.29 ft.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	129	11,100	188	e859	4,430	3,040	1,450	1,020	858	1,500	162	262
2	121	7,030	614	e871	2,840	2,320	984	804	2,360	681	125	208
3	136	4,410	1,500	e760	1,990	1,750	691	559	1,630	380	101	189
4	202	3,070	1,320	e751	1,340	1,150	518	371	794	356	89	141
5	222	2,050	2,050	e737	966	755	417	280	584	480	80	115
6	431	1,160	2,200	e794	837	675	351	226	556	578	90	105
7	414	721	1,520	791	709	712	312	191	2,700	458	109	85
8	469	544	1,200	778	968	699	277	171	2,410	521	110	69
9	335	435	1,180	887	e1,000	630	254	189	1,400	2,910	318	56
10	261	390	1,810	1,280	e932	612	320	481	1,230	4,370	1,030	50
11	225	375	3,000	2,750	1,890	771	1,840	1,210	1,940	7,050	770	47
12	170	402	2,350	5,160	3,270	2,700	3,030	586	1,440	5,140	360	44
13	135	921	1,790	4,740	2,390	2,470	3,140	397	3,290	2,690	1,170	72
14	113	1,030	1,540	3,910	1,650	1,600	2,790	308	3,700	1,910	1,140	74
15	109	752	1,120	3,210	1,310	1,150	2,220	248	2,010	1,710	459	76
16	101	570	710	2,460	952	917	1,560	197	918	1,040	229	80
17	157	444	554	1,660	690	851	1,130	155	501	428	147	106
18	172	371	2,000	1,040	e457	877	754	124	453	252	102	80
19	162	322	2,680	714	699	1,890	909	105	451	205	81	62
20	107	293	1,870	576	769	2,500	1,050	91	267	6,770	65	95
21	79	254	2,160	451	785	1,900	846	80	183	3,580	53	1,180
22	69	198	2,460	e406	707	1,570	626	59	135	1,620	45	3,460
23	79	184	2,030	e402	679	1,220	461	85	106	1,310	39	1,890
24	165	200	1,640	e402	634	978	597	90	86	984	34	848
25	181	233	1,350	e420	588	903	1,130	75	79	704	31	468
26	171	223	1,120	e413	799	919	1,080	63	149	646	29	296
27	634	219	993	e399	3,670	1,410	824	58	201	568	47	215
28	1,580	215	941	e680	4,160	2,700	644	187	2,510	357	1,560	163
29	3,780	206	933	2,720	---	3,330	648	718	3,940	239	1,650	127
30	15,500	199	939	6,770	---	3,080	785	560	3,120	184	870	104
31	14,700	---	e864	6,850	---	2,200	---	569	---	158	434	---
Total	41,109	38,521	46,626	54,641	42,111	48,279	31,638	10,257	40,001	49,779	11,529	10,767
Mean	1,326	1,284	1,504	1,763	1,504	1,557	1,055	331	1,333	1,606	372	359
Max	15,500	11,100	3,000	6,850	4,430	3,330	3,140	1,210	3,940	7,050	1,650	3,460
Min	69	184	188	399	457	612	254	58	79	158	29	44
Cfsm	1.94	1.87	2.20	2.57	2.20	2.27	1.54	0.48	1.95	2.34	0.54	0.52
In.	2.23	2.09	2.53	2.97	2.29	2.62	1.72	0.56	2.17	2.70	0.63	0.58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	558	1,113	1,606	1,473	1,736	2,060	1,499	876	604	364	255	406
Max	2,804	4,026	3,816	4,268	4,044	4,372	3,207	3,214	2,851	2,803	1,106	1,854
(WY)	(2007)	(1986)	(1978)	(2005)	(1981)	(2011)	(2005)	(1989)	(1986)	(2006)	(1980)	(1990)
Min	42.1	67.1	141	109	322	577	186	106	39.8	30.5	17.0	11.0
(WY)	(1992)	(1979)	(1999)	(1977)	(1987)	(1990)	(2012)	(1987)	(1988)	(1991)	(1991)	(1995)

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SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1975 - 2013	
Annual total	315,131		425,258			
Annual mean	861		1,165		1,042	
Highest annual mean					1,411	2011
Lowest annual mean					524	1999
Highest daily mean	15,500	Oct 30	15,500	Oct 30	22,500	Jul 28, 2006
Lowest daily mean	18	Jun 30	29	Aug 26	4.7	Sep 12, 2002
Annual seven-day minimum	19	Jun 26	40	Aug 21	5.1	Sep 8, 2002
Maximum peak flow			19,500	Oct 30	35,000	Jul 28, 2006
Maximum peak stage			13.27	Oct 30	19.35	Jul 28, 2006
Instantaneous low flow			28	Aug 26	4.2	Sep 10, 2002
Annual runoff (cfsm)	1.26		1.70		1.52	
Annual runoff (inches)	17.11		23.09		20.67	
10 percent exceeds	2,220		2,770		2,840	
50 percent exceeds	217		680		418	
90 percent exceeds	32		91		42	

