Water-Data Report 2013

04114000 GRAND RIVER AT PORTLAND, MI

Southeastern Lake Michigan Basin
Upper Grand Subbasin

LOCATION.--Lat 42°51′23″, long 84°54′44″ referenced to North American Datum of 1927, in NW ¼ sec.4, T.5 N., R.5 W., Ionia County, MI, Hydrologic Unit 04050004, on left bank at downstream side of bridge on Kent Street, 1.0 mi south of Portland, 1.9 mi upstream from Looking Glass River, and at mile 115.

DRAINAGE AREA.--1,385 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--August 1952 to March 1982, June 1988 to current year. Gage-height records collected in this vicinity 1907-28 (flood seasons only) are contained in reports of the National Weather Service.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 704.52 ft above NAVD 88 (levels by Michigan Department of Transportation). Prior to July 6, 1953, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Slight diurnal fluctuation caused by powerplants upstream from station. Gage-height telemeter at station.

Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 04114000, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/04114000.2013.pdf

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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	219	401	295	e423	3,010	951	939	2,930	1,400	1,360	435	744
2	208	445	348	e397	2,430	894	896	3,090	1,170	1,170	480	765
3	182	441	427	e453	e1,690	960	842	2,910	1,040	1,100	336	585
4	184	433	342	e329	e1,560	859	776	2,560	937	1,020	374	544
5	191	456	393	e375	e1,610	793	806	2,270	862	879	367	496
6	300	428	423	460	e1,510	839	765	1,980	820	815	290	468
7	223	359	590	447	e1,290	819	699	1,780	760	728	359	451
8	209	357	569	e420	e1,460	752	754	1,650	720	770	348	381
9	202	351	568	420	1,160	723	867	1,420	662	756	361	442
10	181	353	549	367	1,020	1,060	2,130	1,430	744	821	378	551
11	220	336	582	498	1,120	1,710	3,220	1,410	1,090	858	341	509
12	258	309	613	738	1,300	2,610	5,080	1,310	915	667	340	417
13	209	406	560	901	1,240	2,510	4,860	1,220	4,240	648	593	530
14	476	375	492	1,250	1,260	2,290	4,420	1,200	4,950	577	621	500
15	639	375	467	1,230	1,220	2,010	3,840	1,140	3,860	554	508	562
16	445	373	390	1,170	1,170	1,840	3,620	1,030	3,460	531	612	517
17	361	371	516	968	e1,090	1,700	3,130	1,060	2,890	511	574	500
18	399	367	419	974	e999	1,520	4,990	941	2,320	495	584	447
19	614	361	393	826	980	1,560	6,430	899	1,770	486	468	407
20	428	364	469	854	1,080	1,330	7,000	902	1,530	477	469	513
21	407	335	660	e750	1,040	1,310	7,110	862	1,230	466	471	439
22	418	314	683	e621	954	1,200	6,720	872	1,050	428	454	319
23	639	371	613	e500	988	1,180	5,530	959	929	516	451	319
24	809	356	624	e551	872	1,140	5,080	1,000	811	515	416	354
25	543	354	595	e578	861	1,070	4,650	841	851	454	406	392
26	484	330	474	e636	862	1,080	4,100	826	863	468	312	369
27	427	296	439	e652	847	1,070	3,740	732	872	378	410	327
28	378	343	e554	e636	971	1,010	3,290	845	715	413	1,590	366
29	409	364	e399	e822	---	929	3,020	2,590	1,620	410	1,480	344
30	367	334	e426	e1,350	---	990	2,740	2,180	1,470	323	931	296
31	423	---	e472	3,200	---	912	---	1,600	---	348	877	---
Total	11,452	11,058	15,344	23,796	35,594	39,621	102,044	46,439	46,551	19,942	16,636	13,854
Mean	369	369	495	768	1,271	1,278	3,401	1,498	1,552	643	537	462
Max	809	456	683	3,200	3,010	2,610	7,110	3,090	4,950	1,360	1,590	765
Min	181	296	295	329	847	723	699	732	662	323	290	296
Cfsm	0.27	0.27	0.36	0.55	0.92	0.92	2.46	1.08	1.12	0.46	0.39	0.33
In.	0.31	0.30	0.41	0.64	0.96	1.06	2.74	1.25	1.25	0.54	0.45	0.37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	564	780	966	1,074	1,251	2,061	1,952	1,440	960	595	471	467
Max	1,766	2,743	2,579	2,989	3,655	4,202	3,936	4,676	2,587	2,268	1,590	2,228
(WY)	(1982)	(1993)	(2012)	(1993)	(2001)	(1974)	(1975)	(1956)	(1989)	(1968)	(2011)	(2008)
Min	132	174	161	184	186	382	683	373	258	155	166	133
(WY)	(1964)	(1965)	(1964)	(1963)	(1963)	(1964)	(1964)	(1958)	(1988)	(1965)	(1965)	(1963)

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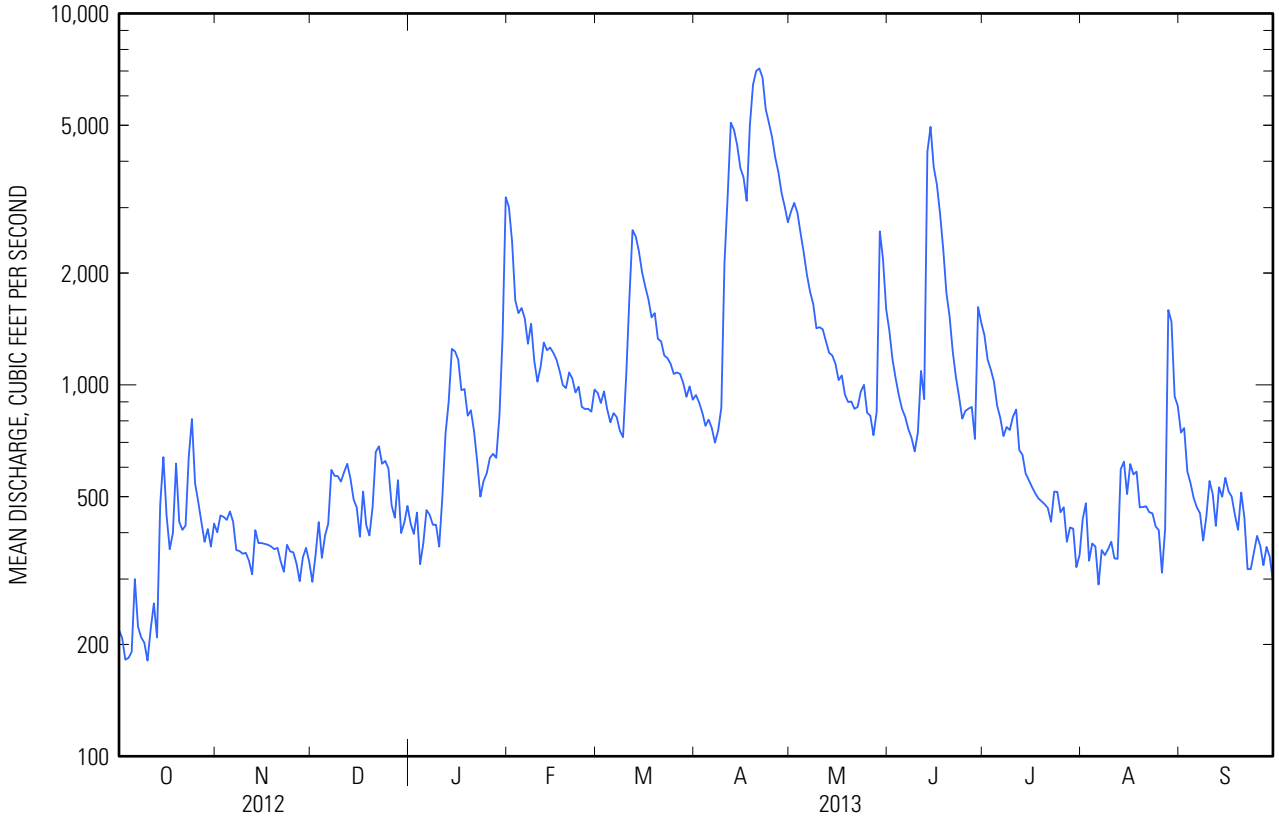
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1952 - 2013	
Annual total	344,082		382,331			
Annual mean	940		1,047		1,046	
Highest annual mean					1,830	1993
Lowest annual mean					282	1964
Highest daily mean	4,210	Mar 3	7,110	Apr 21	12,200	Apr 21, 1975
Lowest daily mean	146	Aug 30	181	Oct 10	58	Oct 9, 1963
Annual seven-day minimum	186	Aug 27	213	Oct 4	85	Aug 18, 1963
Maximum peak flow			[a]7,290	Apr 19	12,400	Apr 21, 1975
Maximum peak stage			10.86	Jun 13	12.98	Apr 21, 1975
Instantaneous low flow			166	Oct 3[b]	38	Oct 10, 1963
Annual runoff (cfsm)	0.679		0.756		0.755	
Annual runoff (inches)	9.24		10.27		10.26	
10 percent exceeds	2,230		2,300		2,250	
50 percent exceeds	504		662		704	
90 percent exceeds	217		348		250	

[a] Gage height, 10.84 ft.
[b] Also occurred Oct. 10.