Water-Data Report 2013

04155500 PINE RIVER NEAR MIDLAND, MI

Saginaw Basin
Pine Subbasin

LOCATION.--Lat 43°33′52″, long 84°22′09″ referenced to North American Datum of 1927, in SW ¼ NW ¼ sec.4, T.13 N., R.1 E., Midland County, MI, Hydrologic Unit 04080202, on left bank at downstream side of bridge on Meridian Road, 7.2 mi southwest of Midland, and 7.8 mi upstream from Chippewa River.

DRAINAGE AREA.--390 mi^2, approximately.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1934 to September 1938, February 1948 to September 1997, October 2000 to current year.

REVISED RECORDS.--WSP 1207: Drainage area. WSP 1307: 1935(M). WSP 1337: 1936-38, 1948-49.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 623.94 ft above NGVD 29. Prior to Sept. 30, 1938, nonrecording gage at same site at datum 5.55 ft lower. Feb. 3, 1948 to Dec. 13, 1951, nonrecording gage at present site and datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Regulation at low and medium flows by hydroelectric power plant at St. Louis. Some diversion upstream from station for irrigation. 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 04155500, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/04155500.2013.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	33	216	117	e220	e1,150	e298	786	755	1,380	346	184	161
2	42	197	127	e190	e1,020	e293	773	694	1,090	321	97	129
3	53	197	131	e190	e844	e285	650	651	831	288	158	112
4	78	193	151	e190	e793	e249	642	613	657	221	144	116
5	111	187	171	e190	e742	e266	602	567	558	183	119	101
6	98	162	165	e190	e671	e261	512	506	456	216	117	90
7	96	157	154	e180	e578	e261	496	460	417	191	117	71
8	97	154	144	e194	e511	e261	481	430	403	194	137	78
9	91	153	146	e182	e476	e271	887	377	338	192	106	91
10	86	148	144	e191	e480	e278	2,350	394	329	194	152	83
11	82	143	142	e300	e502	e558	2,780	396	323	190	133	116
12	84	145	143	e521	e484	e893	4,320	383	326	178	96	101
13	105	141	137	e595	e450	e1,150	3,670	396	379	163	74	77
14	169	131	134	e548	e418	1,170	2,570	425	379	129	100	79
15	218	128	138	e402	e384	1,140	2,030	436	419	150	91	80
16	202	139	174	e347	e351	1,130	2,130	370	469	130	79	75
17	257	132	213	e317	e314	897	1,920	318	418	119	70	92
18	321	129	257	e300	e329	716	3,170	312	385	119	51	83
19	318	126	288	e286	e334	599	4,760	306	360	113	61	103
20	280	127	299	e273	e343	560	3,580	272	348	109	61	154
21	255	125	685	e286	e340	464	2,810	453	304	77	69	143
22	247	125	693	e227	e331	451	2,180	616	240	69	62	117
23	306	128	597	e219	e309	385	1,650	1,060	244	88	40	125
24	346	122	582	e217	e317	372	1,570	1,130	209	96	41	97
25	349	126	e450	e217	e281	376	1,470	855	245	96	49	88
26	347	124	e390	e219	e290	361	1,210	862	205	98	59	97
27	340	119	e340	e225	e294	401	1,110	816	180	88	83	93
28	327	119	e270	e252	e298	524	917	904	245	107	349	80
29	279	117	e250	e424	---	608	851	2,440	332	124	175	84
30	e239	114	e240	e1,380	---	657	796	1,900	293	125	210	99
31	250	---	e230	e1,710	---	740	---	1,440	---	118	225	---
Total	6,106	4,324	8,102	11,182	13,634	16,875	53,673	21,537	12,762	4,832	3,509	3,015
Mean	197	144	261	361	487	544	1,789	695	425	156	113	100
Max	349	216	693	1,710	1,150	1,170	4,760	2,440	1,380	346	349	161
Min	33	114	117	180	281	249	481	272	180	69	40	71
Cfsm	0.51	0.37	0.67	0.92	1.25	1.40	4.59	1.78	1.09	0.40	0.29	0.26
In.	0.58	0.41	0.77	1.07	1.30	1.61	5.12	2.05	1.22	0.46	0.33	0.29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	219	267	303	276	353	682	632	396	268	152	141	189
Max	1,238	784	782	865	1,356	1,725	1,789	1,125	900	655	421	2,034
(WY)	(1987)	(1993)	(2007)	(1973)	(1938)	(1976)	(2013)	(2004)	(1989)	(1994)	(1972)	(1986)
Min	69.8	94.8	96.9	70.5	87.2	207	212	106	43.9	35.5	37.4	54.5
(WY)	(2004)	(1950)	(1963)	(1977)	(2003)	(1964)	(1963)	(1958)	(1934)	(1934)	(1936)	(2003)

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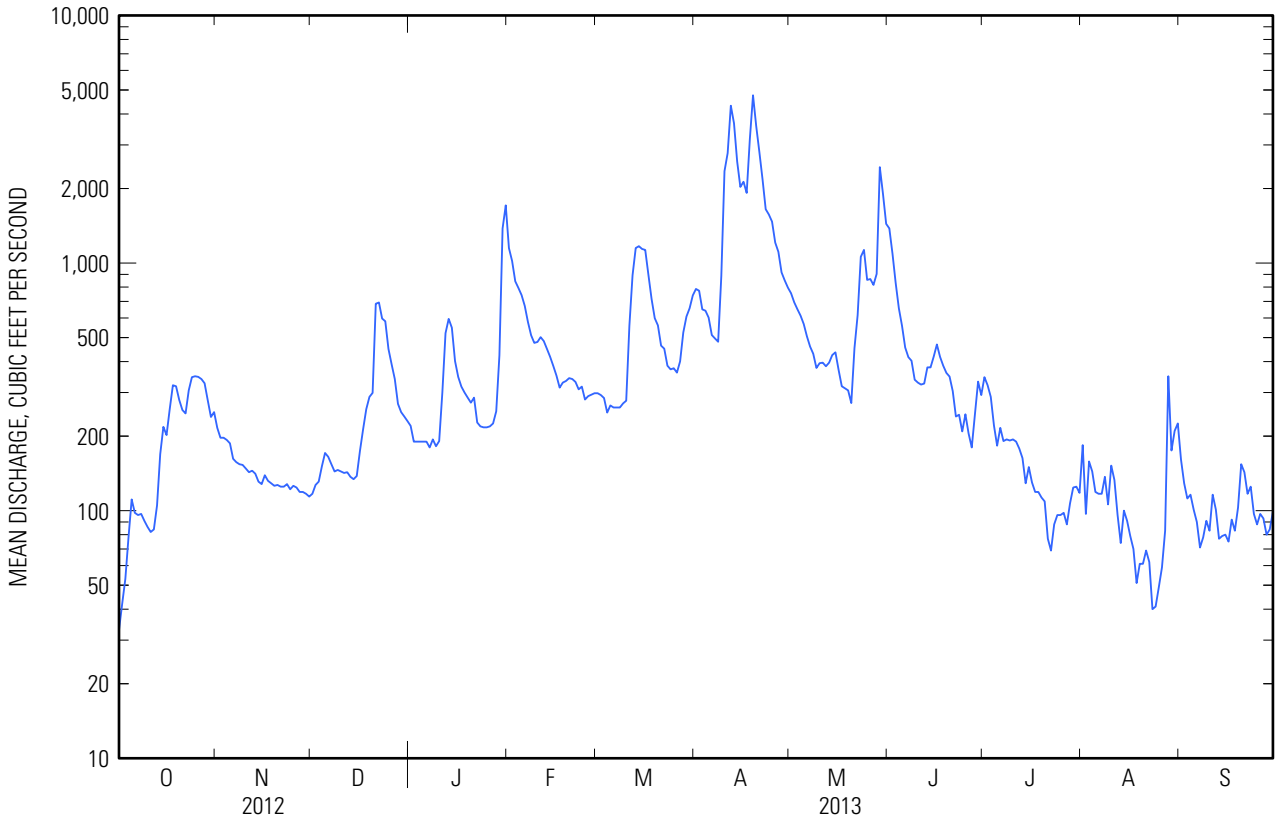
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1934 - 2013	
Annual total	98,354		159,551			
Annual mean	269		437		323	
Highest annual mean					541	1986
Lowest annual mean					150	1963
Highest daily mean	1,750	Aug 11	4,760	Apr 19	8,750	Sep 12, 1986
Lowest daily mean	27	Sep 30	33	Oct 1	7.8	Jul 2, 1988
Annual seven-day minimum	35	Sep 26	54	Aug 20	17	Aug 13, 1936
Maximum peak flow			4,990	Apr 19	[a]9,360	Sep 12, 1986
Maximum peak stage			8.66	Apr 19	[b]13.81	Feb 22, 1997
Instantaneous low flow					[c]7.6	Jul 1, 1988[d]
Annual runoff (cfsm)	0.689		1.12		0.828	
Annual runoff (inches)	9.38		15.22		11.25	
10 percent exceeds	475		895		670	
50 percent exceeds	232		255		208	
90 percent exceeds	87		91		86	

[a] Gage height 11.74 ft.
[b] Backwater from ice.
[c] Does not include water years 1934-52.
[d] Also occurred July 2, 1988.