

Water-Data Report 2011

**471446097001701 ELM RIVER AT GRANDIN, ND**

Upper Red Basin  
Elm-Marsh Subbasin

LOCATION.--Lat 47°14'46", long 97°00'17" referenced to North American Datum of 1927, in NW ¼ SE ¼ sec.34, T.144 N., R.50 W., Traill County, ND, Hydrologic Unit 09020107, at bridge on county road 0.5 mi north of Grandin.

DRAINAGE AREA.--Not determined.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--March and April 2010, March to September 2011.

GAGE.--Water stage recorder. Datum of gage 853.06 ft above National Geodetic Vertical Datum of 1929 (levels by North Dakota State Water Commission, 2011).

REMARKS.--Records fair except those for estimated daily discharges, which are poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 5,800 ft<sup>3</sup>/s, April 7, gage height, 32.29 ft, backwater from ice; minimum daily discharge, 0.96 ft<sup>3</sup>/s, September 14.

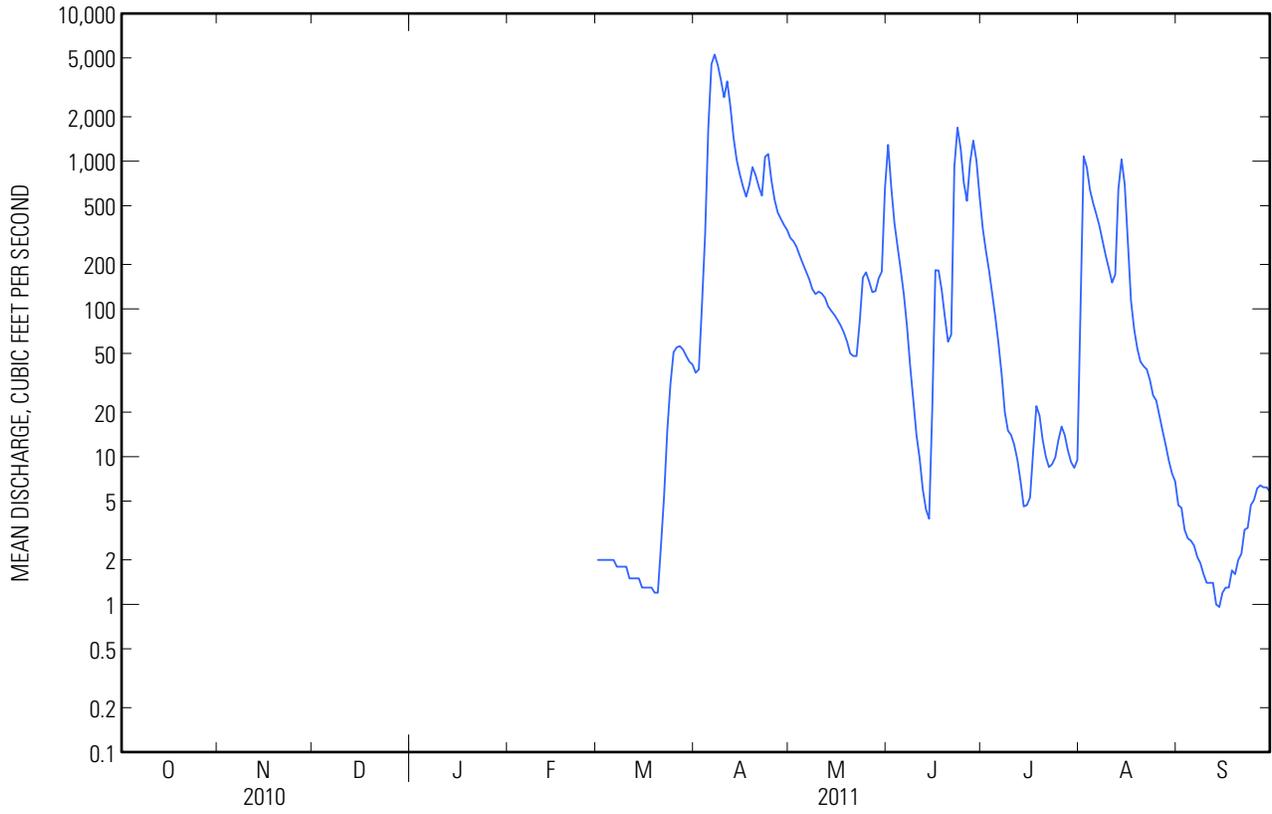
## 471446097001701 ELM RIVER AT GRANDIN, ND—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**  
**DAILY MEAN VALUES**

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	---	---	---	---	---	e2.0	e37	303	1,290	352	100	4.7
2	---	---	---	---	---	e2.0	e39	287	667	248	1,080	4.5
3	---	---	---	---	---	e2.0	e107	262	383	182	907	3.2
4	---	---	---	---	---	e2.0	e321	229	264	127	638	2.8
5	---	---	---	---	---	e2.0	e1,670	202	184	88	520	2.7
6	---	---	---	---	---	e2.0	e4,540	179	125	58	438	2.5
7	---	---	---	---	---	e1.8	e5,270	159	76	36	364	2.1
8	---	---	---	---	---	e1.8	4,480	136	41	20	288	1.9
9	---	---	---	---	---	e1.8	3,540	126	24	15	229	1.6
10	---	---	---	---	---	e1.8	2,710	131	14	14	187	1.4
11	---	---	---	---	---	e1.5	3,470	127	9.7	12	151	1.4
12	---	---	---	---	---	e1.5	2,350	119	6.0	9.5	171	1.4
13	---	---	---	---	---	e1.5	1,450	104	4.4	6.8	646	1.0
14	---	---	---	---	---	e1.5	1,020	97	3.8	4.6	1,030	0.96
15	---	---	---	---	---	e1.3	814	91	21	4.7	700	1.2
16	---	---	---	---	---	e1.3	673	84	183	5.3	286	1.3
17	---	---	---	---	---	e1.3	576	77	182	11	114	1.3
18	---	---	---	---	---	e1.3	689	69	134	22	73	1.7
19	---	---	---	---	---	e1.2	911	60	88	19	54	1.6
20	---	---	---	---	---	e1.2	804	50	60	13	44	2.0
21	---	---	---	---	---	e2.5	673	48	67	10	41	2.2
22	---	---	---	---	---	e5.5	585	48	917	8.5	39	3.2
23	---	---	---	---	---	e15	1,070	82	1,690	8.9	33	3.3
24	---	---	---	---	---	e31	1,120	163	1,220	9.9	26	4.7
25	---	---	---	---	---	e51	745	177	716	13	24	5.1
26	---	---	---	---	---	e55	550	153	539	16	19	6.1
27	---	---	---	---	---	e56	450	130	990	14	15	6.4
28	---	---	---	---	---	e53	407	132	1,380	11	12	6.2
29	---	---	---	---	---	e48	370	161	1,010	9.2	9.4	6.2
30	---	---	---	---	---	e44	342	179	581	8.4	7.7	5.8
31	---	---	---	---	---	e42	---	654	---	9.5	6.8	---
<b>Total</b>	---	---	---	---	---	435.8	41,783	4,819	12,869.9	1,366.3	8,252.9	90.46
<b>Mean</b>	---	---	---	---	---	14.1	1,393	155	429	44.1	266	3.02
<b>Max</b>	---	---	---	---	---	56	5,270	654	1,690	352	1,080	6.4
<b>Min</b>	---	---	---	---	---	1.2	37	48	3.8	4.6	6.8	0.96
<b>Ac-ft</b>	---	---	---	---	---	864	82,880	9,560	25,530	2,710	16,370	179

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**GAGE HEIGHT, FEET**  
**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**  
**DAILY MEAN VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
1	---	---	---	---	---	---	---	24.68	26.14	24.88	24.02	23.23	
2	---	---	---	---	---	---	---	24.65	25.40	24.61	25.89	23.22	
3	---	---	---	---	---	---	---	24.60	24.95	24.41	25.69	23.18	
4	---	---	---	---	---	---	---	24.52	24.66	24.23	25.31	23.17	
5	---	---	---	---	---	---	---	28.06	24.45	24.42	24.08	23.16	
6	---	---	---	---	---	---	---	31.15	24.39	24.22	23.93	23.15	
7	---	---	---	---	---	---	---	31.24	24.34	24.03	23.78	23.13	
8	---	---	---	---	---	---	---	28.65	24.26	23.82	23.64	23.11	
9	---	---	---	---	---	---	---	27.88	24.23	23.68	23.58	23.10	
10	---	---	---	---	---	---	---	27.36	24.25	23.56	23.56	23.08	
11	---	---	---	---	---	---	---	27.89	24.23	23.49	23.52	23.08	
12	---	---	---	---	---	---	---	27.15	24.21	23.42	23.49	23.08	
13	---	---	---	---	---	---	---	26.41	24.15	23.37	23.43	23.04	
14	---	---	---	---	---	---	---	25.98	24.12	23.35	23.38	23.03	
15	---	---	---	---	---	---	---	25.78	24.09	23.59	23.38	23.06	
16	---	---	---	---	---	---	---	25.62	24.07	24.41	23.40	23.07	
17	---	---	---	---	---	---	---	25.40	24.03	24.41	23.51	23.07	
18	---	---	---	---	---	---	---	25.50	23.99	24.26	23.66	23.10	
19	---	---	---	---	---	---	---	25.73	23.94	24.08	23.63	23.09	
20	---	---	---	---	---	---	---	25.55	23.88	23.94	23.55	23.12	
21	---	---	---	---	---	---	---	25.36	23.87	23.97	23.50	23.14	
22	---	---	---	---	---	---	---	25.22	23.87	25.63	23.47	23.18	
23	---	---	---	---	---	---	---	25.87	24.05	26.54	23.48	23.18	
24	---	---	---	---	---	---	---	25.94	24.35	26.09	23.50	23.23	
25	---	---	---	---	---	---	---	25.47	24.39	25.50	23.54	23.24	
26	---	---	---	---	---	---	---	25.16	24.32	25.24	23.59	23.27	
27	---	---	---	---	---	---	---	24.98	24.25	25.84	23.57	23.28	
28	---	---	---	---	---	---	---	24.89	24.25	26.25	23.52	23.39	
29	---	---	---	---	---	---	---	24.82	24.34	25.87	23.48	23.28	
30	---	---	---	---	---	---	---	24.76	24.39	25.30	23.47	23.27	
31	---	---	---	---	---	---	---	25.22	---	---	23.48	---	
<b>Mean</b>	---	---	---	---	---	---	---	26.45	24.27	24.65	23.69	24.29	23.15
<b>Max</b>	---	---	---	---	---	---	---	31.24	25.22	26.54	24.88	25.89	23.28
<b>Min</b>	---	---	---	---	---	---	---	24.76	23.87	23.35	23.38	23.29	23.03

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