

**REPORT OF THE ENGINEERING COMMITTEE
TO THE
KANSAS-NEBRASKA BIG BLUE RIVER COMPACT ADMINISTRATION**

May 13, 2020

The engineering committee was not given any special assignments from the Compact Administration and did not meet during the past year. The United States Geological Survey (USGS) and the Lower Big Blue Natural Resources District (LBBNRD) provided the 2019 data for this report.

Review of Streamflow Data

The Compact sets forth the following streamflow targets at the stateline gaging stations:

	Big Blue River	Little Blue River
May	45 cfs	45 cfs
June	45 cfs	45 cfs
July	80 cfs	75 cfs
August	90 cfs	80 cfs
September	65 cfs	60 cfs

During the May through September time period of the 2019 water year (October 1, 2018 through September 30, 2019) there were no shortages for Compact target flows. The mean daily streamflow at the Barneston gage on the Big Blue River (Exhibit A) and the Hollenberg gage (Exhibit B) exceeded target flows throughout the year.

Real-time and historical data for these gaging stations can be found at the following websites:

Big Blue River – http://waterdata.usgs.gov/ne/nwis/uv/?site_no=06882000

Little Blue River – http://waterdata.usgs.gov/ne/nwis/uv/?site_no=06884025

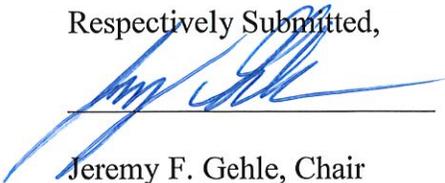
Review of Groundwater Data

The Lower Big Blue Natural Resources District provided the groundwater levels (Exhibit C) for the Big Blue Basin near Beatrice.

Review of Wells in the Regulatory Reaches

Exhibit D is a listing of the active irrigation wells within the regulatory reaches. There were no new wells drilled in the Big Blue River regulatory area and no new wells drilled in the Little Blue River regulatory area during this reporting period.

Respectively Submitted,



Jeremy F. Gehle, Chair
Nebraska



Chris Beightel, P.E.
Kansas

SUMMARY STATISTICS

	Water Year 2019		Water Years 1933 - 2019	
Annual total	923,200			
Annual mean	2,529		858.2	
Highest annual mean			2,781	1993
Lowest annual mean			115.0	1934
Highest daily mean	24,800	Mar 17	50,000	Jun 09, 1941
Lowest daily mean	276.0	Oct 04	1.00	Nov 30, 1945
Annual 7-day minimum	316.1	Jan 24	15.1	Aug 03, 1934
Maximum peak flow			57,700	Jun 09, 1941
Maximum peak stage			34.30 ^a	Jun 09, 1941
Annual runoff (cfsm)	0.569		0.193	
Annual runoff (inches)	7.72		2.62	
10 percent exceeds	6,398		1,760	
50 percent exceeds	953.0		283.0	
90 percent exceeds	363.0		109.0	

^a Gage height at different site and(or) datum

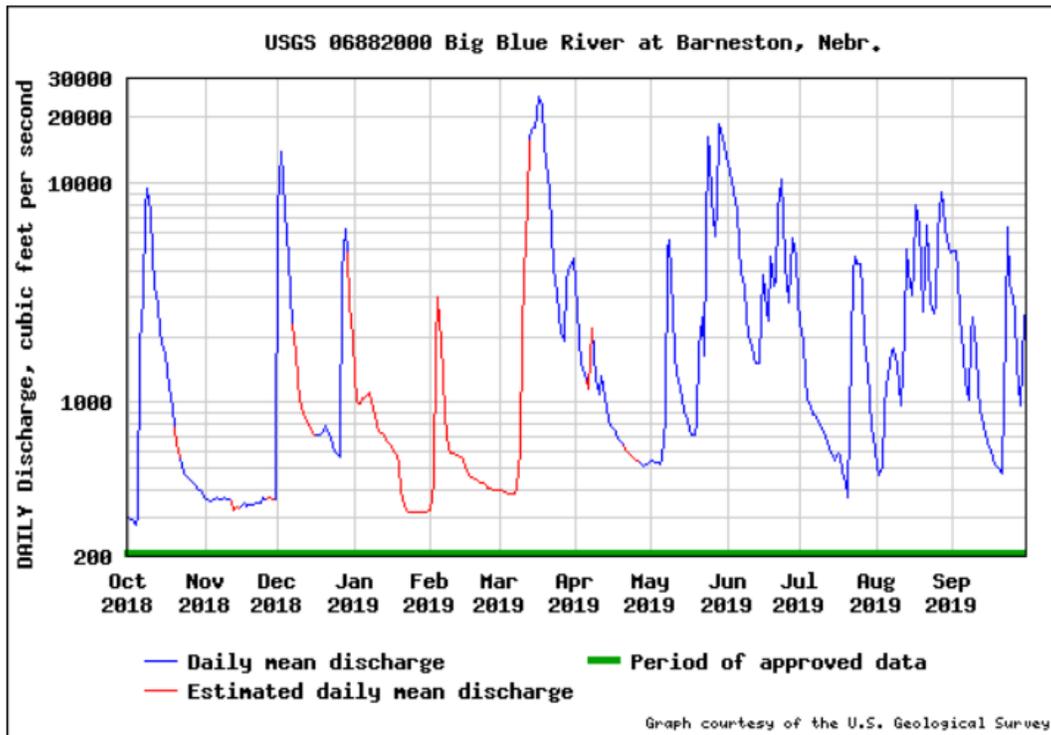


Exhibit A

SUMMARY STATISTICS

	Water Year 2019		Water Years 1974 - 2019	
Annual total	515,200			
Annual mean	1,411		490.9	
Highest annual mean			1,891	1993
Lowest annual mean			172.9	2006
Highest daily mean	16,200	Mar 14	39,300	Jul 26, 1992
Lowest daily mean	147.0	Oct 04	24.2	Sep 12, 2012
Annual 7-day minimum	166.7	Nov 18	26.0	Sep 06, 2012
Maximum peak flow			59,200	May 07, 2015
Maximum peak stage			23.07	Oct 12, 1973
Annual runoff (cfsm)	0.513		0.177	
Annual runoff (inches)	6.96		2.41	
10 percent exceeds	3,394		816.0	
50 percent exceeds	572.0		190.0	
90 percent exceeds	191.6		96.0	

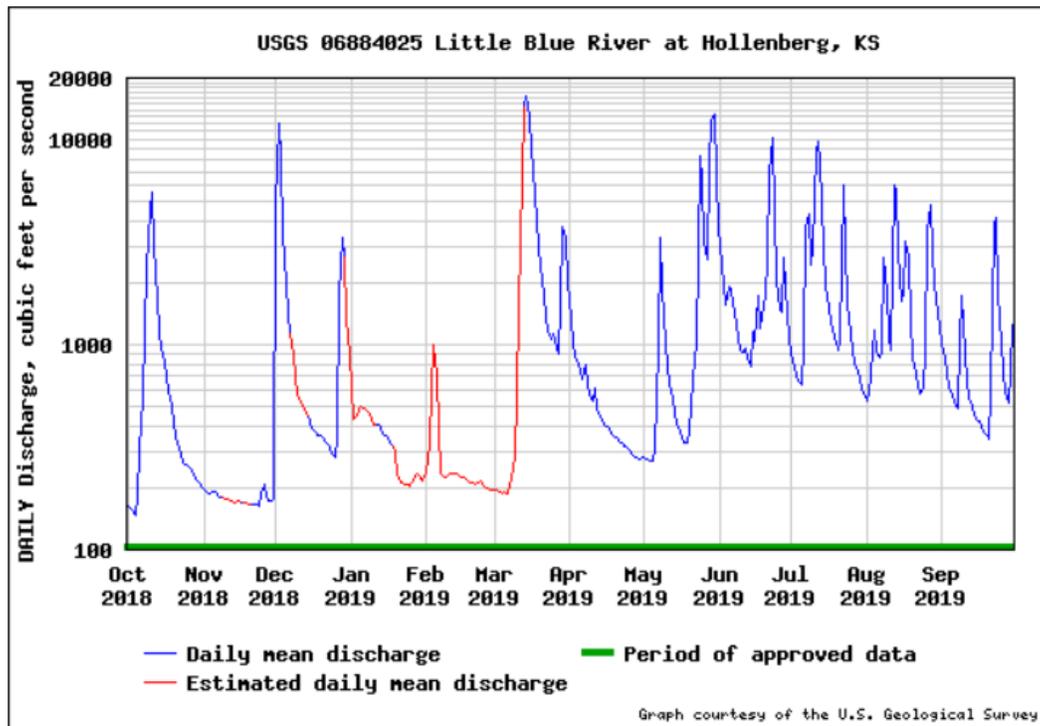


Exhibit B

BIG BLUE RIVER COMPACT STATIC WATER LEVELS 2019

LEGAL	SECT	SITE	TYPE	Spring 2019	Fall 2019
4N-5E	2	AAAA	OW	91.5	91.89
4N-5E	2	DDAA	IW	15.64	16.36
4N-5E	4	BBBC	IW	18.27	18.09
4N-5E	9	CBCC	IW	72.57	70.54
4N-5E	10	DDAA	IW	22.77	24.72
4N-5E	11	DACA	IW	13.64	15.18
4N-5E	14	ABBB	IW	8.18	10.80
4N-5E	25	AACD	IW	16.91	15.42
5N-4E	12	ABBA	IW	15.66	16.89
5N-4E	13	BADD	IW	9.12	11.85
5N-4E	23	BABB	IW	13.69	14.27
5N-4E	24	AACD	IW	13.23	14.90
5N-5E	7	CADD	IW	58.63	59.64
5N-5E	20	BCCD	IW	16.52	17.01
5N-5E	21	DDBB	IW	60.69	52.78
5N-5E	29	CBBB	IW	12.29	12.44
5N-5E	33	AADD	IW	16.75	15.48

OW - OBSERVATION WELLS

IW - IRRIGATION WELLS

Exhibit C

Big Blue River Regulatory Area Wells					
Registration Number	Location T-R-S	Completion Date	Depth (FT)	Registration Pumping Capacity (GPM)	Filing Date
G-036485	4N-5E-11BC	3/28/1972	82	750	4/24/1972
G-038314	4N-5E-2DD	1/16/1973	188	1,300	1/29/1973
G-047820	4N-5E-12BB	11/1/1975	117	1,200	12/4/1975
G-050086	5N-5E-33AD	5/26/1976	123	800	6/9/1976
G-054047	4N-5E-24BB	3/1/1976	84	800	1/6/1977
G-054260	4N-5E-14AA	6/1/1974	70	800	1/14/1977
G-054261	4N-5E-14AB	5/2/1970	70	800	1/14/1977
G-056152	4N-5E-4BB	4/14/1977	91	1,000	5/11/1977
G-059128	5N-5E-29AA	4/25/1977	60	400	1/4/1978
G-059727	5N-5E-33CB	4/19/1978	91	1,200	4/20/1978
G-081769	4N-5E-13CD	4/22/1994	65	250	6/24/1994
G-100788	5N-5E-29AB	3/19/1999	65	500	6/2/1999
G-110669	4N-5E-13CC	7/12/1995	64	375	6/29/2001
G-110847	4N-5E-3DA	5/4/1979	82	800	7/2/2001
G-110849	5N-5E-29DD	4/30/1983	102	800	7/2/2001
G-151969	5N-5E-33BB	12/11/2008	112	800	1/20/2009
G-155061	4N-5E-10BB	12/4/2009	98	800	1/27/2010
G-166637	5N-5E-33BC	03/20/2013	120	1,200	3/28/2013

Little Blue River Regulatory Area Wells					
Registration Number	Location T-R-S	Completion Date	Depth (FT)	Registration Pumping Capacity (GPM)	Filing Date
G-058158	2N-2E-16AD	8/15/1977	29	650	9/6/1977

Exhibit D