



IN REPLY REFER TO:

# United States Department of the Interior

BUREAU OF RECLAMATION  
Nebraska Kansas Area Office  
McCook Field Office  
1706 West 3rd Street  
McCook, NE 69001



DEC 7 2006

NK-410  
PRJ-23.00 BSW

Mr. Kenneth Nelson  
Kansas-Bostwick Irrigation  
District No. 2  
P.O. Box 165  
Courtland, KS 66939

Subject: 2006 Irrigation Season

Dear Mr. Nelson:

The Kansas-Bostwick Irrigation District used a total of 38,446 acre-feet of water during the 2006 irrigation season. There were 10,595 acre-feet used above Lovewell and 27,851 acre-feet used below Lovewell.

We are enclosing the following: The 2006 "Water Use Statement", "Analysis of Use and Loss Distribution," and copies of the Courtland 0.7, Courtland 15.1, Courtland 34.8 and Courtland 38.0 canal records. We will use the data from your "Kansas-Bostwick Irrigation District Monthly Water Report Summary" for our "Monthly Water Distribution" reports. Please send the number of acres irrigated on the upper and lower Courtland Canals in 2006 along with an estimate of acres to be irrigated during the 2007 season to the McCook Office at your earliest convenience.

Sincerely,

Marvin R. Swanda  
Office Manager

Enclosures

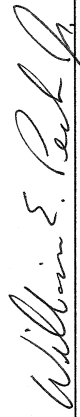
Attachments  
Avalible

PRES.	<u>CH</u>
SEC'Y	<u>BP</u>
TREAS.	<u>MD</u>
SUPT.	<u>KN</u>

WATER USE STATEMENT  
FOR  
KANSAS-BOSTWICK IRRIGATION DISTRICT NO 2.  
P. O. Box 165  
Courtland KS 66939  
  
Contract No. 009D6B0120

	May	June	July	Aug.	Sept.	Oct.	Nov.	Total (A.F.)
Use above Lovewell	75	2,389	6,514	1,423	194	0	0	10,595
Use below Lovewell	492	4,796	13,730	8,833	0	0	0	27,851
Total (A.F.)	567	7,185	20,244	10,256	194	0	0	38,446

These records are considered final for the 2006 irrigation season.

  
\_\_\_\_\_  
Chief, Water Operations Group

**ANALYSIS OF USE AND LOSS DISTRIBUTION**  
**KANSAS-BOSTWICK IRRIGATION DISTRICT NO. 2**

**Year 2006**

**ACRE- FEET**

		Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Total
Passing Mile 15.1	(1)	3380	2820	3840	4380	2750	3540	7970	1150	1260	0	0	0	31090
Transported to Lovewell	(2)	2473	1968	2862	3509	1004	478	1863	91	399	0	0	0	14647
Kansas-Bostwick Use	(3)	0	0	0	0	15	472	4368	258	41	0	0	0	5154
Loss State Line to Lovewell (1)-(2)-(3)	(4)	907	852	978	871	1731	2590	1739	801	820	0	0	0	11289
Kansas-Bostwick Share of Loss - Kansas	(5)	0	0	0	0	25	1287	1219	592	76	0	0	0	3199
Loss - 0.7 to State Line	(6)	891	844	968	852	2344	1269	1323	775	823	0	0	0	10089
Kansas-Bostwick Share of Loss - Nebraska	(7)	0	0	0	0	35	630	927	573	77	0	0	0	2242
Total Use above Lovewell Reservoir (3)+(5)+(7)	(8)	0	0	0	0	75	2389	6514	1423	194	0	0	0	10595
Released to Lower Courtland 38.0	(9)	0	0	0	0	492	4796	13730	8833	0	0	0	0	27851
<b>Total Use by Kansas-Bostwick</b>	<b>(10)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>567</b>	<b>7185</b>	<b>20244</b>	<b>10256</b>	<b>194</b>	<b>0</b>	<b>0</b>		<b>38446</b>

# Courtland Canal, Mile 0.7

Courtland Stateline + 15 cfs +1 day

JAN 2006	Discharge QJ
1	82.00
2	76.00
3	73.00
4	71.00
5	68.00
6	70.00
7	71.00
8	70.00
9	61.00
10	69.00
11	73.00
12	71.00
13	69.00
14	71.00
15	70.00
16	66.00
17	67.00
18	71.00
19	70.00
20	67.00
21	68.00
22	64.00
23	67.00
24	68.00
25	69.00
26	71.00
27	71.00
28	68.00
29	66.00
30	67.00
31	68.00
Total	cfs 2153 AF 4270.5

# Courtland Canal, Mile 0.7

Courtland Stateline + 15 cfs +1 day

FEB 2006	Discharge QJ
1	69.00
2	68.00
3	66.00
4	65.00
5	66.00
6	66.00
7	67.00
8	65.00
9	68.00
10	53.00
11	49.00
12	61.00
13	83.00
14	75.00
15	63.00
16	49.00
17	48.00
18	49.00
19	54.00
20	57.00
21	62.00
22	71.00
23	93.00
24	82.00
25	73.00
26	75.00
27	76.00
28	74.00
Total	1847 3663.5

# Courtland Canal, Mile 0.7

Courtland Stateline + 15 cfs +1 day

March 2006	Discharge QJ
1	71.00
2	69.00
3	69.00
4	72.00
5	69.00
6	70.00
7	71.00
8	71.00
9	71.00
10	72.00
11	69.00
12	69.00
13	69.00
14	69.00
15	69.00
16	68.00
17	68.00
18	74.00
19	77.00
20	79.00
21	101.00
22	82.00
23	81.00
24	81.00
25	84.00
26	93.00
27	95.00
28	95.00
29	95.00
30	95.00
31	106.00
Total	cfs 2424 AF 4808.0

# Courtland 0.7

APR-2006      CONE + 15 CFS +1 day

DAY	QJ
1	102.00
2	99.00
3	90.00
4	90.00
5	89.00
6	97.00
7	107.00
8	100.00
9	97.00
10	95.00
11	90.00
12	90.00
13	89.00
14	86.00
15	84.00
16	83.00
17	83.00
18	78.00
19	77.00
20	78.00
21	79.00
22	78.00
23	77.00
24	79.00
25	83.00
26	83.00
27	84.00
28	93.00
29	91.00
30	87.00

Min	77.00
Max	107.00
KAF	5232

# Courtland 0.7

MAY-2006 CONE + 15 CFS +1 day

DAY	QJ
1	85
2	94
3	101
4	92.00
5	88.00
6	88.00
7	91.00
8	78.00
9	80.00
10	80.00
11	80.00
12	80.00
13	80.00
14	80.00
15	80.00
16	80.00
17	80.00
18	80.00
19	80.00
20	80.00
21	80.00
22	80.00
23	80.00
24	80.00
25	80.00
26	80.00
27	80.00
28	82.00
29	82.00
30	82.00
31	85.00
Min	78.00
Max	101.00
KAF	5094

May 1- 8 Estimated  
State Line +15 cfs + 1 Day

Canal checked on May 9  
Estimated based on  
measurements.



# Courtland 0.7

JUN-2006 CONE + 15 CFS +1 day

DAY	QJ
1	44.00
2	38.00
3	37.00
4	35.00
5	29.00
6	26.00
7	24.70
8	23.10
9	22.00
10	21.10
11	22.70
12	24.80
13	24.00
14	28.00
15	40.00
16	44.00
17	44.00
18	95.00
19	138.72
20	310.08
21	149.21
22	152.00
23	93.00
24	84.00
25	75.00
26	80.00
27	116.00
28	172.00
29	200.00
30	231.87
CANAL CHECKED 6/19 thru 6/21	
CANAL CHECKED 6/29 thru 6/30	

Min	21.10
Max	310.08
KAF	4809

# Courtland Canal, Mile 0.7

Courtland Stateline + 15 cfs +1 day

JUL 2006	Discharge QJ	
1	209.00	CANAL CHECKED
2	208.00	7-1 thru 7-14
3	223.00	
4	237.00	
5	283.00	
6	289.00	
7	282.00	
8	278.00	
9	286.00	
10	311.00	
11	329.00	
12	341.00	
13	293.00	
14	160.00	
15	94.00	Estimated
16	85.00	Stateline
17	81.00	+15 cfs + 1 day
18	76.00	
19	75.00	
20	45.00	
21	25.00	
22	56.00	
23	53.00	
24	57.00	
25	63.00	
26	62.00	
27	60.00	
28	57.00	
29	52.00	
30	15.00	
31	0.00	
Total	cfs AF	4685 9292.7

# Courtland Canal, Mile 0.7

Courtland Stateline + 15 cfs +1 day

AUG 2006	Discharge QJ
1	0.00
2	0.00
3	0.00
4	0.00
5	0.00
6	0.00
7	0.00
8	0.00
9	0.00
10	0.00
11	0.00
12	0.00
13	0.00
14	0.00
15	0.00
16	0.00
17	22.88
18	117.23
19	101.93
20	265.28
21	53.00
22	53.00
23	42.00
24	34.00
25	31.00
26	34.00
27	42.00
28	46.00
29	45.00
30	44.00
31	39.00
Total	970.32
	AF 1924.6

CANAL CHECKED  
8-17 thru 8-20

# Courtland 0.7

SEP-2006	CONE + 15 CFS +1 day	
DAY	QJ	
1	34.00	
2	34.00	
3	34.00	
4	34.00	
5	34.00	
6	34.00	
7	34.00	
8	34.00	
9	48.00	
10	50.00	
11	45.00	
12	42.00	
13	40.00	
14	36.00	
15	35.00	
16	31.00	
17	28.00	
18	28.00	
19	28.00	
20	31.00	
21	42.00	
22	37.00	
23	35.00	
24	34.00	
25	33.00	
26	32.00	
27	30.00	
28	31.00	
29	31.00	
30	31.00	
Min	28.00	
Max	50.00	
KAF	2083	

U.S. DEPARTMENT OF THE INTERIOR - U.S. GEOLOGICAL SURVEY - WATER RESOURCES

STATION NUMBER 06852500 COURTLAND CANAL AT NEBRASKA-KANSAS STATE LINE SOURCE AGENCY USGS STATE 31 COUNTY 129  
 LATITUDE 400015 LONGITUDE 0980755 WAD27 DRAINAGE AREA CONTIBUTING DRAINAGE AREA DATUM 1612.46 NGVD29

Date processed: 2006-11-28 09:55 BY vwalczyk  
 Lowest aging status in period is WORKING  
 WD #16, from DCP

Discharge, cubic feet per second  
 WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	34	29	71	53	59	91	72	36	212	4.9	24
2	19	35	36	67	54	56	87	70	29	200	3.1	19
3	20	36	33	61	53	54	84	79	23	199	0.00	10
4	16	35	31	58	51	54	75	86	22	200	0.00	19
5	16	35	31	56	50	57	75	77	20	227	0.00	19
6	15	35	23	53	51	54	74	73	14	246	0.00	19
7	16	37	31	55	51	55	82	73	11	248	0.00	30
8	18	37	37	55	51	55	92	76	9.7	250	0.00	37
9	20	36	26	55	52	56	85	76	8.1	248	0.00	19
10	22	35	28	46	53	56	82	63	7.1	258	0.00	31
11	24	37	30	54	38	57	80	5.7	6.1	218	0.00	35
12	12	39	34	58	34	54	75	120	7.7	250	0.00	30
13	11	37	37	56	46	54	75	75	9.8	243	0.00	27
14	14	32	40	54	68	54	74	58	13	167	0.00	25
15	30	36	41	56	60	54	71	27	9.0	107	0.00	21
16	39	35	40	55	48	54	69	4.5	25	79	0.00	20
17	29	36	40	51	34	53	68	9.2	29	70	0.00	13
18	28	38	39	52	33	53	68	28	66	66	0.00	13
19	28	35	36	56	34	59	63	38	61	61	0.00	13
20	35	40	40	55	39	62	62	39	223	60	1.77	13
21	36	41	33	52	42	64	63	34	168	30	78	16
22	34	41	38	53	47	86	64	32	133	41	38	22
23	33	41	40	49	56	67	63	32	137	41	38	22
24	31	41	46	52	78	66	62	34	78	38	27	20
25	31	40	50	53	67	66	64	26	69	42	19	19
26	32	41	54	54	60	69	68	23	60	48	16	18
27	33	45	56	56	60	79	68	23	60	48	16	18
28	33	50	63	56	61	80	69	25	65	47	19	17
29	34	64	69	53	80	80	78	20	157	42	31	16
30	35	69	69	51	80	80	78	17	207	37	30	16
31	35	---	58	52	---	88	---	39	---	29	29	---
TOTAL	847	1137	1238	1706	1421	1935	2207	1385.5	1786.4	4018	579.00	637
MEAN	27.3	37.9	39.9	55.0	50.8	62.4	73.6	44.7	59.5	130	18.7	21.2
MAX	36	50	69	71	78	88	92	120	223	258	177	37
MIN	15	26	23	46	33	53	62	4.5	6.1	10	0.00	13
AC-FT	1680	2260	2460	3380	3820	3840	4380	2750	3540	7970	1150	1260
CAL YR 2005	TOTAL 18945.81 MEAN 51.9 MAX 295 MIN 0.00 AC-FT 37580											
WTR YR 2006	TOTAL 18896.90 MEAN 51.8 MAX 258 MIN 0.00 AC-FT 37480											

# Courtland Canal, Mile 34.8

Courtland Stateline - 15 cfs -1 day

Jan 2006	Discharge QJ
1	43.00
2	56.00
3	52.00
4	46.00
5	43.00
6	41.00
7	38.00
8	40.00
9	41.00
10	40.00
11	31.00
12	39.00
13	43.00
14	41.00
15	39.00
16	41.00
17	40.00
18	36.00
19	37.00
20	41.00
21	40.00
22	37.00
23	38.00
24	34.00
25	37.00
26	38.00
27	39.00
28	41.00
29	41.00
30	38.00
31	36.00
Total	cfs AF
	1247 2473.4

# Courtland Canal, Mile 34.8

Courtland Stateline - 15 cfs -1 day

Feb 2006	Discharge	
	QJ	
1	37.00	
2	38.00	
3	39.00	
4	38.00	
5	36.00	
6	35.00	
7	36.00	
8	36.00	
9	37.00	
10	35.00	
11	38.00	
12	23.00	
13	19.00	
14	31.00	
15	53.00	
16	45.00	
17	33.00	
18	19.00	
19	18.00	
20	19.00	
21	24.00	
22	27.00	
23	32.00	
24	41.00	
25	63.00	
26	52.00	
27	43.00	
28	45.00	
Total	cfs	992
	AF	1967.6

# Courtland Canal, Mile 34.8

Courtland Stateline - 15 cfs -1 day

Mar 2006	Discharge QJ
1	46.00
2	44.00
3	41.00
4	39.00
5	39.00
6	42.00
7	39.00
8	40.00
9	41.00
10	41.00
11	41.00
12	42.00
13	39.00
14	39.00
15	39.00
16	39.00
17	39.00
18	38.00
19	38.00
20	44.00
21	47.00
22	49.00
23	71.00
24	52.00
25	51.00
26	51.00
27	54.00
28	63.00
29	65.00
30	65.00
31	65.00
Total	1443
cfs AF	2862.2



# Courtland 34.8

APR-2006	CONE, -15cfs, -1 Day	
DAY	QJ	
1	73.00	
2	76.00	
3	72.00	
4	69.00	
5	60.00	
6	60.00	
7	59.00	
8	67.00	
9	77.00	
10	70.00	
11	67.00	
12	65.00	
13	60.00	
14	60.00	
15	59.00	
16	56.00	
17	54.00	
18	53.00	
19	53.00	
20	48.00	
21	47.00	
22	48.00	
23	49.00	
24	48.00	
25	47.00	
26	49.00	
27	53.00	
28	53.00	
29	54.00	
30	63.00	
Min	47.00	
Max	77.00	
KAF	3509	

# Courtland 34.8

MAY-2006	CONE, -15cfs, -1 Day	
DAY	QJ	
1	61	
2	57	
3	55	
4	64	
5	71.00	
6	62.00	
7	58.00	
8	58.00	
9	20.00	Canal Off
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
Min	20.00	
Max	71.00	
KAF	1004	

# Courtland 34.8

JUN-2006	CONE, -15cfs, -1 Day	
DAY	QJ	
1	0.00	
2	0.00	
3	0.00	
4	0.00	
5	0.00	
6	0.00	
7	0.00	
8	0.00	
9	0.00	
10	0.00	
11	0.00	
12	0.00	
13	0.00	
14	0.00	
15	0.00	
16	0.00	
17	0.00	
18	0.00	
19	0.00	
20	0.00	
21	50.00	
22	75.00	
23	53.00	
24	53.00	
25	5.00	
26	5.00	
27	0.00	
28	0.00	
29	0.00	
30	0.00	
Min	0.00	
Max	75.00	
KAF	478	

Courtland Canal, Mile 34.8

Jul 2006	Discharge QJ
1	0.00
2	0.00
3	13.00
4	184.00
5	0.00
6	0.00
7	0.00
8	0.00
9	0.00
10	26.00
11	199.00
12	145.00
13	197.00
14	140.00
15	0.00
16	0.00
17	5.00
18	0.00
19	30.00
20	0.00
21	0.00
22	0.00
23	0.00
24	0.00
25	0.00
26	0.00
27	0.00
28	0.00
29	0.00
30	0.00
31	0.00
Total	939
cfs AF	1862.5

# Courtland Canal, Mile 34.8

Estimated from measurements and  
daily reports.

Aug 2006	Discharge QJ
1	0.00
2	0.00
3	0.00
4	0.00
5	0.00
6	0.00
7	0.00
8	0.00
9	0.00
10	0.00
11	0.00
12	0.00
13	0.00
14	0.00
15	0.00
16	0.00
17	0.00
18	0.00
19	0.00
20	0.00
21	0.00
22	26.00
23	13.00
24	7.00
25	0.00
26	0.00
27	0.00
28	0.00
29	0.00
30	0.00
31	0.00
Total	cfs 46 AF 91.2

# Courtland 34.8

SEP-2006      CONE, -15cfs, -1 Day

DAY	QJ
1	0.00
2	0.00
3	0.00
4	0.00
5	0.00
6	0.00
7	0.00
8	15.00
9	22.00
10	4.00
11	18.00
12	20.00
13	15.00
14	12.00
15	10.00
16	6.00
17	5.00
18	5.00
19	5.00
20	5.00
21	5.00
22	5.00
23	12.00
24	7.00
25	5.00
26	5.00
27	5.00
28	5.00
29	5.00
30	5.00
9-17 thru 9-22 Est. from daily reports.	
Sep 25-30 Estimated	
Min	0.00
Max	22.00
KAF	399

NKAO - MFO  
DCP Data

Courtland Canal, Mile 38.0 May-2006

DAY	UPSTREAM GAGE HEIGHT	SHIFT	DISCHARGE (CFS)
1	0.00		0.00
2	0.00		0.00
3	0.00		0.00
4	0.00		0.00
5	0.00		0.00
6	0.00		0.00
7	0.00		0.00
8	0.00		0.00
9	0.00		0.00
10	0.00		0.00
11	0.41		33.80
12	0.58		82.38
13	0.36		24.90
14	0.32		19.08
15	0.28		14.00
16	0.25		10.86
17	0.26		11.98
18	0.29		15.08
19	0.27		12.78
20	0.25		10.02
21	0.24		9.42
22	0.09		3.62
23	0.00		0.00
24	0.00		0.00
25	0.00		0.00
26	0.00		0.00
27	0.00		0.00
28	0.00		0.00
29	0.00		0.00
30	0.00		0.00
31	0.00		0.00

MIN. DISCHARGE  
0.00

MAX. DISCHARGE  
82.38

MEAN DISCHARGE  
17.71

TOTAL ACRE-FEET  
492

NKAO - MFO  
DCP Data

Courtland Canal, Mile 38.0 Jun-06

DAY	UPSTREAM GAGE HEIGHT	SHIFT	DISCHARGE (CFS)
1	0.00		0.00
2	0.00		0.00
3	0.00		0.00
4	0.00		0.00
5	0.00		0.00
6	0.00		0.00
7	0.00		0.00
8	0.00		0.00
9	0.00		0.00
10	0.00		0.00
11	0.00		0.00
12	0.00		0.00
13	0.00		0.00
14	0.52		35.42
15	0.52		49.35
16	0.52		47.88
17	0.52		49.32
18	0.53		49.68
19	0.64		70.65
20	0.75		92.91
21	0.80		103.82
22	0.88		121.19
23	0.98		144.82
24	1.05		162.90
25	1.06		165.28
26	1.20		203.64
27	1.40		261.32
28	1.47		284.66
29	1.50		294.43
30	1.46		280.86

MIN. DISCHARGE  
35.42

MAX. DISCHARGE  
294.43

MEAN DISCHARGE  
142.24

TOTAL ACRE-FEET  
4,796



NKAO - MFO  
DCP Data

Courtland Canal, Mile 38.0 Jul-2006

DAY	UPSTREAM GAGE HEIGHT	SHIFT	DISCHARGE (CFS)
1	1.45		276.56
2	1.47		284.65
3	1.44		275.26
4	1.47		284.49
5	1.52		299.15
6	1.52		299.80
7	1.56		314.29
8	1.49		291.61
9	1.45		277.75
10	0.83		122.47
11	0.55		54.38
12	0.56		55.34
13	0.56		55.62
14	0.68		78.36
15	0.74		91.02
16	0.75		91.17
17	0.84		113.13
18	1.16		195.67
19	1.51		296.84
20	1.66		348.76
21	0.95		156.75
22	0.70		82.91
23	0.73		87.11
24	0.86		117.86
25	1.19		201.65
26	1.53		304.44
27	1.79		393.66
28	1.85		414.38
29	1.71		365.79
30	1.64		339.73
31	1.67		351.75

MIN. DISCHARGE  
54.38

MAX. DISCHARGE  
414.38

MEAN DISCHARGE  
223.30

TOTAL ACRE-FEET  
13,730

NKAO - MFO  
DCP Data

Courtland Canal, Mile 38.0 Aug-2006

DAY	UPSTREAM GAGE HEIGHT	SHIFT	DISCHARGE (CFS)
1	1.68		353.09
2	1.69		358.30
3	1.48		287.77
4	1.27		222.88
5	1.16		192.89
6	1.14		185.88
7	1.37		254.78
8	1.56		315.12
9	1.65		344.80
10	1.67		350.37
11	1.60		326.24
12	1.54		305.37
13	1.52		300.98
14	1.56		313.72
15	1.41		264.83
16	0.44		76.09
17	0.00		0.00
18	0.00		0.00
19	0.00		0.00
20	0.00		0.00
21	0.00		0.00
22	0.00		0.00
23	0.00		0.00
24	0.00		0.00
25	0.00		0.00
26	0.00		0.00
27	0.00		0.00
28	0.00		0.00
29	0.00		0.00
30	0.00		0.00
31	0.00		0.00

MIN. DISCHARGE  
76.09

MAX. DISCHARGE  
358.3

MEAN DISCHARGE  
278.32

TOTAL ACRE-FEET  
8,833