

7-1596B (9-89)
Bureau of Reclamation



United States Department of the Interior

BUREAU OF RECLAMATION
Great Plains Region
Nebraska-Kansas Area Office
P.O. Box 1607
Grand Island, Nebraska 68802-1607

DEC 07 2005

IN REPLY REFER TO:
NK-410
PRJ-23.00 BSW

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

Subject: 2005 Irrigation Season

Dear Mr. Nelson:

The Kansas-Bostwick Irrigation District used a total of 27,780 acre-feet of water during the 2005 irrigation season. There was 1,864 acre-feet used above Lovewell and 25,916 acre-feet used below Lovewell.

We are enclosing the following: The 2005 "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 2005 along with an estimate of acres to be irrigated during the 2006 season to the McCook Office at your earliest convenience.

Sincerely,

MARVIN R. SWANDA


Marvin R. Swanda
Office Manager

Enclosures

- bc: NK-100 S. Ronshaugen (w/copy of Water Use Statement)
- NK-410-General File (w/o encl)
- NK-410-Bill (w/o encl)
- NK-410-Dale (w/encl)
- NK-410 (w/o encl)

WBR:DEEllerton:jec:12-01-05:308-345-4400:NK-410
MAUSRJCATTLERS\DALE\KSBOST05.USE

92
55

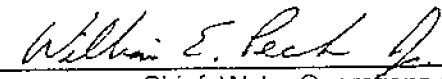
OFFICIAL FILE COPY		
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12/6	WEP	410
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McCook Field Office 1706 West 3 rd Street McCook, NE 69001		
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WATER USE STATEMENT
FOR
KANSAS-BOSTWICK IRRIGATION 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	0	541	1,221	102	0	0	0	1,864
Use below Lovewell	0	4,310	14,572	7,034	0	0	0	25,916
Total (A.F.)	0	4,851	15,793	7,136	0	0	0	27,780

These records are considered final for the 2005 irrigation season.


Chief, Water Operations Group

USBR - NIKAO

ANALYSIS OF USE AND LOSS DISTRIBUTION
KANSAS-BOSTWICK IRRIGATION DISTRICT NO. 2
Year 2005
A C R E - F E E T

	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Total
(1) Passing Mile 15.1	2747	4265	4926	6557	4608	5764	893	2118	1375	1843	0	0	35096
(2) Transported to Lovewell	1804	3430	3950	5677	3749	4164	0	1562	913	884	0	0	26133
(3) Kansas-Bostwick Use	0	0	0	0	0	374	125	62	0	0	0	0	561
(4) Loss State Line to Lovewell (1)-(2)-(3)	943	835	976	880	859	1226	768	494	462	959	0	0	8402
(5) Kansas-Bostwick Share of Loss - Kansas	0	0	0	0	0	101	768	19	0	0	0	0	888
(6) Loss - 0.7 to State Line	938	822	985	873	871	795	328	545	566	645	0	0	7368
(7) Kansas-Bostwick Share of Loss - Nebraska	0	0	0	0	0	66	328	21	0	0	0	0	415
(8) Total Use above Lovewell Reservoir (3)+(5)+(7)	0	0	0	0	0	541	1221	102	0	0	0	0	1864
(9) Released to Lower Courtland	0	0	0	0	0	4310	14572	7034	0	0	0	0	25916
(10) Total Use by Kansas-Bostwick	0	0	0	0	0	4851	15793	7136	0	0	0	0	27780

Courtland Canal, Mile 0.7

Courtland Stateline + 15 cfs +1 day

Jan 2005	Discharge QJ	
1	70.14	
2	68.63	
3	56.76	
4	44.58	
5	41.85	
6	46.88	
7	51.32	
8	51.99	
9	47.54	
10	45.08	
11	47.56	
12	53.16	
13	53.64	
14	51.77	
15	50.25	
16	49.89	
17	50.10	
18	49.54	
19	54.69	
20	58.95	
21	59.55	
22	58.97	
23	63.42	
24	63.99	
25	72.11	
26	77.88	
27	82.23	
28	83.09	
29	81.12	
30	83.43	
31	87.91	
Total	cfs AF	1858.02 3685.4

Courtland Canal, Mile 0.7

Courtland Stateline + 15 cfs +1 day

FEB 2005		Discharge QJ
1		90.14
2		95.42
3		97.04
4		104.68
5		109.22
6		78.58
7		77.90
8		76.47
9		76.93
10		79.40
11		98.79
12		112.80
13		111.48
14		119.40
15		109.19
16		99.10
17		92.41
18		90.59
19		90.75
20		88.18
21		86.13
22		84.00
23		82.12
24		82.16
25		82.00
26		83.00
27		84.42
28		82.42
Total	cfs	2564.7233
	AF	5087.1

Courtland 0.7

MAR-2005 CONE + 15 CFS+1 day

DAY	QJ
1	86.42
2	86.93
3	85.85
4	85.5
5	85.78
6	83.89
7	82.01
8	82.32
9	82.74
10	79.78
11	80.26
12	79.54
13	78.25
14	79.18
15	79.93
16	80.51
17	80.43
18	77.85
19	78.47
20	94.96
21	135.03
22	141.63
23	139.94
24	126.19
25	115.94
26	111.82
27	113.96
28	110.55
29	108.78
30	111.65
31	114.20

Min 77.85
Max 141.63
KAF 5911

Courtland 0.7

APR-2005 CONE + 15 CFS +1 day

DAY	QJ
1	110.84
2	108.23
3	105.93
4	104.45
5	107.46
6	115.47
7	213.34
8	205.77
9	152.33
10	140.43
11	148.15
12	166.60
13	153.01
14	135.11
15	129.20
16	123.22
17	120.40
18	119.59
19	116.50
20	113.82
21	108.77
22	105.52
23	104.47
24	105.75
25	104.53
26	103.59
27	106.09
28	107.46
29	105.55
30	104.55

Min	103.59
Max	213.34
KAF	7430

Courtland 0.7

MAY-2005 CONE + 15 CFS #1 day

DAY	QJ
1	101.94
2	98.91
3	97.19
4	98.43
5	99.89
6	100.94
7	99.50
8	94.96
9	93.96
10	90.30
11	104.83
12	167.35
13	137.72
14	101.64
15	91.97
16	87.34
17	84.31
18	79.58
19	76.83
20	77.59
21	72.91
22	70.02
23	69.43
24	67.89
25	68.72
26	67.47
27	66.02
28	70.67
29	71.60
30	73.58
31	78.69
Min	66.02
Max	167.35
KAF	5479

Courtland 0.7

JUN-2005 CONE + 15 CFS +1 day

DAY	QJ
1	81.19
2	98.16
3	122.70
4	208.01
5	239.06
6	144.89
7	101.84
8	83.09
9	86.94
10	120.18
11	150.93
12	147.73
13	123.12
14	100.05
15	73.90
16	60.41
17	165.31
18	316.79
19	199.48
20	120.08
21	117.87
22	127.89
23	55.85
24	53.86
25	40.83
26	33.75
27	27.39
28	38.80
29	37.40
30	29.47
Min	27.39
Max	316.79
KAF	6559

Courtland 0.7

JUL-2005 CONE + 15 CFS (1 day)

DAY	QJ
1	23.49
2	25.8
3	25.09
4	0.00
5	0.00
6	0.00
7	0.00
8	0.00
9	22.98
10	85.34
11	31.34
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	0.00
23	0.00
24	0.00
25	43.46
26	122.49
27	109.14
28	59.93
29	38.56
30	28.08
31	0.00

Min	0.00
Max	122.49
KAF	1221

Courtland 0.7

AUG-2005 CONE + 15 CFS +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	18.47
17	23.56
18	52.85
19	97.04
20	100.14
21	95.48
22	106.61
23	239.99
24	148.64
25	96.85
26	76.44
27	65.58
28	60.56
29	55.01
30	55.52
31	50.04

Min 0.00
Max 239.99
KAF 2663

Courtland 0.7

SEP-2005 CONE + 10 CFS #1 day

DAY	QJ
1	41.06
2	39.83
3	38.35
4	39.77
5	43.09
6	42.86
7	41.02
8	38.01
9	34.94
10	32.59
11	31.57
12	31.23
13	30.08
14	30.47
15	29.53
16	29.42
17	30.31
18	30.29
19	29.72
20	29.81
21	28.19
22	27.05
23	28.42
24	28.93
25	28.74
26	28.59
27	28.17
28	27.47
29	28.47
30	30.43

Min	27.05
Max	43.09
KAF	1941

Courtland 0.7

OCT-2005 CONE + 10 CFS +1 day

DAY	QJ
1	31.69
2	32.68
3	31.36
4	29.36
5	27.32
6	28.49
7	30.67
8	32.58
9	34.16
10	36.38
11	45.10
12	45.30
13	44.45
14	42.45
15	41.47
16	41.57
17	41.04
18	40.40
19	47.74
20	48.51
21	46.47
22	44.86
23	43.73
24	43.84
25	44.88
26	45.46
27	45.62
28	46.53
29	47.62
30	46.86
31	45.83
Min	27.32
Max	48.51
KAF	2488

ARC040 V2.4D 18-Dec-1997

Station CODE Couillard Canal at State Line, NE
Data for month of JAN, 2005

DAY	GJ	GJ1	GJ_B	HJ	QJ
1	1.18	1.15	0.00	0.00	65.07
2	1.05	1.00	0.00	0.00	55.14
3	0.95	0.95	0.00	0.00	53.63
4	0.76	0.84	0.00	0.00	41.70
5	0.64	0.68	0.00	0.00	29.58
6	0.64	0.64	0.00	0.00	26.85
7	0.64	0.71	0.00	0.00	31.88
8	0.63	0.77	0.00	0.00	36.03
9	0.62	0.79	0.00	0.00	36.99
10	0.62	0.72	0.00	0.00	32.54
11	0.62	0.69	0.00	0.00	36.06
12	0.62	0.72	0.00	0.00	32.58
13	0.62	0.80	0.00	0.00	38.16
14	0.62	0.80	0.00	0.00	38.64
15	-----	0.78	-----	-----	38.77
16	-----	0.77	-----	-----	35.25
17	-----	0.76	-----	-----	34.89
18	-----	0.77	-----	-----	35.10
19	-----	0.76	-----	-----	34.54
20	-----	0.82	-----	-----	39.65
21	0.00	0.86	0.00	0.00	43.95
22	0.00	0.88	0.00	0.00	44.55
23	0.00	0.88	0.00	0.00	43.97
24	0.00	0.93	0.00	0.00	48.42
25	0.00	0.94	0.00	0.00	48.95
26	0.00	1.04	0.00	0.00	57.11
27	0.00	1.10	0.00	0.00	62.88
28	0.00	1.14	0.00	0.00	67.23
29	0.00	1.15	0.00	0.00	68.09
30	0.00	1.23	0.00	0.00	68.72
31	0.00	1.16	0.00	0.00	68.43
Min	0.00	0.64	0.00	0.00	26.85
Max	1.18	1.16	0.00	0.00	68.43
Mean	0.41	0.88	0.00	0.00	44.62
KAF					2.747

Parameter Description

- GJ Daily Mean Canal Gage Height (feet)
- GJ1 Alternate Daily Mean Canal Gage Height (feet)
- GJ_B Canal Gage Height, Downstream, Shift (feet)
- HJ Canal Shift (feet)
- QJ Daily Mean Canal Discharge (cfs)

ARC040 V0.4D 08-Dec-1997

Station CORE Courtland Canal at State Line, NE
Data for month of FEB, 2005

DAY	GJ	GJ1	GJ_B	HJ	QJ
1	0.00	1.20	0.00	0.00	72.91
2	0.00	1.22	0.00	0.00	75.14
3	0.00	1.27	0.00	0.00	80.42
4	0.00	1.28	0.00	0.00	82.04
5	0.00	1.35	0.00	0.00	89.08
6	0.00	1.39	0.00	0.00	94.22
7	0.00	1.08	0.00	0.00	61.58
8	0.00	0.88	0.00	0.00	52.90
9	0.00	0.77	0.00	0.00	51.47
10	0.00	1.09	0.00	0.00	61.92
11	0.00	1.31	0.00	0.00	64.40
12	0.00	1.30	0.00	0.00	63.79
13	0.00	1.42	0.00	0.00	67.80
14	0.00	1.40	0.00	0.00	66.48
15	0.00	1.47	0.00	0.00	104.40
16	0.00	1.39	0.00	0.00	94.19
17	0.00	1.30	0.00	0.00	64.10
18	0.00	1.24	0.00	0.00	77.41
19	0.00	1.27	0.00	0.00	75.59
20	0.00	1.33	0.00	0.00	75.75
21	0.00	1.20	0.00	0.00	73.18
22	0.00	1.18	0.00	0.00	71.12
23	0.00	1.10	0.00	0.00	69.00
24	0.00	1.14	0.00	0.00	67.12
25	0.00	0.44	0.00	0.00	67.16
26	0.00	0.00	0.00	----	67.00
27	0.00	0.00	0.00	----	68.00
28	0.49	0.56	0.00	0.00	69.42

MIN	0.00	0.00	0.00	0.00	61.47
MAX	0.49	1.47	0.00	0.00	104.40
MEAN	0.02	1.07	0.00	0.00	76.79
MAP					4.263

Parameter Description

GJ Daily Mean Canal Gage Height (feet)
 GJ1 Alternate Daily Mean Canal Gage Height (feet)
 GJ_B Canal Gage Height, Downstream, Shift (feet)
 HJ Canal Shift (feet)
 QJ Daily Mean Canal Discharge (cfs)

ARC040 V0.40 08-Dec-1997

Station CONT (Courtland Canal) at State Line, NE
Data for month of MAR, 2005

DAY	G3	GJ1	GJ_E	HJ	QJ
1	1.19	1.14	0.00	0.00	67.42
2	1.15	1.16	0.00	0.00	71.42
3	1.17	1.19	0.00	0.00	71.93
4	1.16	1.18	0.00	0.00	76.85
5	1.15	1.18	0.00	0.00	70.50
6	1.15	1.18	0.00	0.00	76.78
7	1.15	1.16	0.00	0.00	68.49
8	1.12	1.14	0.00	0.00	67.01
9	1.12	1.14	0.00	0.00	67.32
10	1.13	1.15	0.00	0.00	67.74
11	1.09	1.10	0.00	0.00	64.78
12	1.09	1.10	0.00	0.00	65.26
13	1.09	1.12	0.00	0.00	64.54
14	1.08	1.10	0.00	0.00	63.25
15	1.09	1.11	0.00	0.00	64.78
16	1.09	1.12	0.00	0.00	64.93
17	1.09	1.13	0.00	0.00	65.31
18	1.10	1.12	0.00	0.00	65.43
19	1.09	1.10	0.00	0.00	62.85
20	1.07	1.10	0.00	0.00	63.07
21	1.23	1.26	0.00	0.00	79.96
22	1.62	1.60	0.00	0.00	120.03
23	1.66	1.66	0.00	0.00	126.63
24	1.66	1.64	0.00	0.00	124.94
25	1.54	1.53	0.00	0.00	111.19
26	1.44	1.44	0.00	0.00	100.94
27	1.39	1.41	0.00	0.00	96.82
28	1.39	1.43	0.00	0.00	98.96
29	1.33	1.40	0.00	0.00	95.55
30	1.34	1.36	0.00	0.00	93.78
31	1.35	1.41	0.00	0.00	90.65
Min	1.07	1.10	0.00	0.00	62.85
Max	1.66	1.66	0.00	0.00	126.63
Mean	1.23	1.26	0.00	0.00	80.11
KAF					4.926

Parameter Description

G3 Daily Mean Canal Gage Height (feet)
 GJ1 Alternate Daily Mean Canal Gage Height (feet)
 GJ_E Canal Gage Height, Downstream, Shift (feet)
 HJ Canal Shift (feet)
 QJ Daily Mean Canal Discharge (cfs)

AP0046 V2 4D 08-Dec-1997

Station: CONE Courland Canal at State Line, NE
Data for month of APR, 2005

DAY	GJ	GJ1	GD_E	H3	QJ
1	1.37	1.43	0.00	0.00	99.26
2	1.33	1.40	0.00	0.00	95.84
3	1.30	1.38	0.00	0.00	93.33
4	1.28	1.36	0.00	0.00	90.93
5	1.26	1.35	0.00	0.00	89.45
6	1.21	1.37	0.00	0.00	92.86
7	1.28	1.44	0.00	0.00	100.47
8	2.16	2.16	0.00	0.00	198.34
9	2.14	2.13	0.00	0.00	190.77
10	1.73	1.74	0.00	0.00	137.33
11	1.65	1.65	0.00	0.00	125.43
12	1.71	1.71	0.00	0.00	133.15
13	1.85	1.84	0.00	0.00	151.60
14	1.74	1.74	0.00	0.00	138.03
15	1.59	1.56	0.00	0.00	126.11
16	1.53	1.56	0.00	0.00	114.20
17	1.48	1.51	0.00	0.00	108.22
18	1.45	1.48	0.00	0.00	105.40
19	1.44	1.48	0.00	0.00	104.59
20	1.42	1.45	0.00	0.00	101.30
21	1.41	1.42	0.00	0.00	98.82
22	1.38	1.38	0.00	0.00	93.77
23	1.34	1.36	0.00	0.00	90.53
24	1.33	1.35	0.00	0.00	89.47
25	1.34	1.36	0.00	0.00	90.75
26	1.34	1.35	0.00	0.00	89.53
27	1.33	1.34	0.00	0.00	88.59
28	1.35	1.36	0.00	0.00	91.09
29	1.36	1.37	0.00	0.00	92.48
30	1.35	1.36	0.00	0.00	90.25

Min	1.26	1.34	0.00	0.00	88.29
Max	2.16	2.16	0.00	0.00	198.34
Mean	1.49	1.51	0.00	0.00	110.19
RAF					6.557

Parameter Description

GJ	Daily Mean Canal Gage Height (feet)
GJ1	Alternate Daily Mean Canal Gage Height (feet)
GD_E	Canal Gage Height, Downstream, Shift (feet)
H3	Canal Shift (feet)
QJ	Daily Mean Canal Discharge (cfs)

ARC040 V1.4D 08-Dec-1987

Station: CONF Courtland Canal at State Line, NJ
Date for month of MAY, 2005

DAY	GC	GJ1	GJ_E	HJ	QJ
1	1.34	1.25	0.00	0.00	85.88
2	1.31	1.23	0.00	0.00	86.94
3	1.29	1.20	0.00	0.00	83.81
4	1.17	1.08	0.00	0.00	82.15
5	1.28	1.24	0.00	0.00	83.43
6	1.29	1.21	0.00	0.00	84.85
7	1.25	1.22	0.00	0.00	85.54
8	1.27	1.20	0.00	0.00	84.50
9	1.24	1.26	0.00	0.00	79.56
10	1.22	1.23	0.00	0.00	78.96
11	1.19	1.21	0.00	0.00	75.30
12	1.32	1.25	0.01	0.00	89.83
13	1.85	1.65	0.01	0.00	152.35
14	1.63	1.62	0.01	0.00	122.72
15	1.32	1.32	0.01	0.00	80.64
16	1.21	1.24	0.01	0.00	76.87
17	1.18	1.24	0.01	0.00	72.54
18	1.14	1.16	0.01	0.00	69.31
19	1.10	1.12	0.01	0.00	64.58
20	1.08	1.09	0.01	0.00	61.83
21	1.08	1.09	0.01	0.00	62.59
22	1.02	1.04	0.01	0.00	57.91
23	0.99	1.01	0.01	0.00	58.02
24	0.96	1.00	0.01	0.00	54.43
25	0.97	0.99	0.01	0.00	53.85
26	0.99	1.00	0.01	0.00	53.72
27	0.97	0.98	0.01	0.00	52.47
28	0.95	0.96	0.01	0.00	51.62
29	1.01	1.02	0.01	0.00	55.47
30	1.02	1.03	0.01	0.00	56.60
31	1.05	1.05	0.01	0.00	58.58
Min	0.95	0.96	0.00	0.00	51.02
Max	1.85	1.65	0.01	0.00	152.35
Mean	1.19	1.20	0.01	0.00	74.94
IAF					4.608

Parameter Description

GC	Daily Mean Canal Gage Height (feet)
GJ1	Alternate Daily Mean Canal Gage Height (feet)
GJ_E	Canal Gage Height, Downstream, Shift (feet)
HJ	Canal Shift (feet)
QJ	Daily Mean Canal Discharge (cfs)

ARC040 V2.4B 08-Dec-1997

Station CONE Courtland Canal at State Line, NE
Data for month of JUN, 2005

DAY	GJ	GJ1	GJ_B	HJ	QJ
1	1.09	1.11	0.01	0.00	63.69
2	1.12	1.13	0.01	0.00	66.19
3	1.36	1.29	0.01	0.00	83.16
4	1.52	1.50	0.01	0.00	107.76
5	2.21	2.13	0.01	0.00	193.01
6	2.45	2.36	0.01	0.00	224.06
7	1.70	1.66	0.01	0.00	109.89
8	1.23	1.22	0.01	0.00	66.84
9	1.14	1.15	0.01	0.00	62.05
10	1.21	1.18	0.01	0.00	71.94
11	1.54	1.48	0.01	0.00	105.18
12	1.80	1.73	0.01	0.00	135.53
13	1.78	1.76	0.01	0.00	132.73
14	1.56	1.56	0.01	0.00	109.12
15	1.27	1.31	0.01	0.00	85.05
16	1.06	1.05	0.01	0.00	58.90
17	0.89	0.89	0.01	0.00	45.41
18	1.81	1.73	0.01	0.00	150.31
19	3.07	2.84	0.01	0.00	301.79
20	2.21	2.08	0.01	0.00	184.48
21	1.54	1.48	0.01	0.00	105.08
22	1.57	1.46	0.01	0.00	102.87
23	1.60	1.53	0.01	0.00	112.69
24	0.84	0.84	0.01	0.00	40.85
25	0.82	0.81	0.01	0.00	38.86
26	0.62	0.63	0.01	0.00	23.83
27	0.50	0.51	0.01	0.00	18.75
28	0.36	0.40	0.01	0.00	12.19
29	0.58	0.59	0.01	0.00	23.66
30	0.57	0.57	0.01	0.00	22.46

Min	0.36	0.40	0.01	0.00	12.19
Max	3.07	2.84	0.01	0.00	301.79
Mean	1.37	1.33	0.01	0.00	96.87
KAF					5.764

Parameter Description

GJ Daily Mean Canal Gage Height (feet)
 GJ1 Alternate Daily Mean Canal Gage Height (feet)
 GJ_B Canal Gage Height, Downstream, Shift (feet)
 HJ Canal Shift (feet)
 QJ Daily Mean Canal Discharge (cfs)

ARC040 V2 4D 08-Dec-1987

Station CONE Courland Canal at State line, NE
Data for month of JUL, 2005

DAY	GJ	GJ1	GJ_P	HJ	QJ
1	0.43	0.44	0.01	0.00	14.47
2	0.36	0.32	0.01	0.00	5.49
3	0.36	0.29	0.01	0.00	30.80
4	0.36	0.25	0.01	0.00	30.09
5	0.00	0.32	0.01	0.00	0.00
6	0.00	0.26	0.01	0.00	0.00
7	0.00	0.22	0.01	0.00	0.00
8	0.00	0.21	0.01	0.00	0.00
9	0.00	0.25	0.01	0.00	0.00
10	0.35	0.29	0.01	0.00	7.98
11	1.17	1.14	0.01	0.00	70.34
12	0.44	0.47	0.01	0.00	16.34
13	0.00	0.31	0.01	0.00	0.00
14	0.00	0.25	0.01	0.00	0.00
15	0.00	0.21	0.01	0.00	0.00
16	0.00	0.20	0.01	0.00	0.00
17	0.00	0.16	0.01	0.00	0.00
18	0.00	0.18	0.01	0.00	0.00
19	0.00	0.14	0.01	0.00	0.00
20	0.00	0.13	0.01	0.00	0.00
21	0.00	0.11	0.01	0.00	0.00
22	0.00	0.11	0.01	0.00	0.00
23	0.00	0.11	0.01	0.00	0.00
24	0.00	0.11	0.01	0.00	0.00
25	0.00	0.11	0.01	0.00	0.00
26	0.62	0.57	0.01	0.00	31.40
27	1.50	1.50	0.01	0.00	107.49
28	1.47	1.38	0.01	0.00	54.14
29	0.91	0.88	0.01	0.00	44.53
30	0.59	0.59	0.01	0.00	23.56
31	0.40	0.41	0.01	0.00	13.08

Min	0.00	0.11	0.01	0.00	0.00
Max	1.50	1.50	0.01	0.00	107.49
Mean	0.29	0.29	0.01	0.00	14.53
KAP					0.893

Parameter Description

- GJ Daily Mean Canal Gage Height (feet)
- GJ1 Alternate Daily Mean Canal Gage Height (feet)
- GJ_E Canal Gage Height, Downstream, Shift (feet)
- HJ Canal Shift (feet)
- QJ Daily Mean Canal Discharge (cfs)

ARC040 V2 4D 08-Dec-1997

Station CONE Courtland Canal at State Line, NE
Data for month of AUG, 2005

DAY	GJ	GJ1	GJ_E	HJ	QJ
1	0.00	0.20	1.02	0.00	0.00
2	0.00	0.18	0.01	0.00	0.00
3	0.00	0.10	0.01	0.00	0.00
4	0.00	0.14	0.01	0.00	0.00
5	0.00	0.13	0.01	0.00	0.00
6	0.00	0.12	0.01	0.00	0.00
7	0.00	0.11	0.01	0.00	0.00
8	0.00	0.11	0.01	0.00	0.00
9	0.00	0.11	0.01	0.00	0.00
10	0.00	0.11	0.01	0.00	0.00
11	0.00	0.11	0.01	0.00	0.00
12	0.00	0.11	0.01	0.00	0.00
13	0.00	0.11	0.01	0.00	0.00
14	0.00	0.11	0.01	0.00	0.00
15	0.00	0.11	0.01	0.00	0.00
16	0.00	0.11	0.01	0.00	0.00
17	0.26	0.17	0.01	0.00	2.47
18	0.32	0.30	0.01	0.00	8.56
19	0.79	0.77	0.01	0.00	37.85
20	1.35	1.28	0.01	0.00	82.04
21	1.38	1.31	0.01	0.00	85.14
22	1.34	1.27	0.01	0.00	80.44
23	1.45	1.36	0.01	0.00	91.61
24	2.58	2.36	0.01	0.00	224.95
25	1.83	1.70	0.01	0.00	111.64
26	1.34	1.28	0.01	0.00	81.85
27	1.12	1.08	0.01	0.00	71.44
28	0.59	0.96	0.01	0.00	30.56
29	0.82	0.89	0.01	0.00	42.56
30	0.84	0.83	0.01	0.00	40.01
31	0.85	0.85	0.01	0.00	40.52
Min	0.00	0.11	0.01	0.00	0.00
Max	2.58	2.36	0.01	0.00	224.95
Mean	0.56	0.59	0.01	0.00	34.44
KAP					2.118

Parameter Description

- GJ Daily Mean Canal Gage Height (feet)
- GJ1 Alternate Daily Mean Canal Gage Height (feet)
- GJ_E Canal Gage Height, Downstream, Shift (feet)
- HJ Canal Shift (feet)
- QJ Daily Mean Canal Discharge (cfs)

AP0040 V2.4D 08-Dec-1997

Station CONE Courtland Canal at State Line, NE
Data for month of SEP, 2005

DAY	GJ	GJ1	GJ_E	HJ	QJ
1	0.78	0.76	0.01	0.00	35.64
2	0.71	0.70	0.01	0.00	31.06
3	0.69	0.68	0.01	0.00	29.81
4	0.66	0.66	0.01	0.00	28.35
5	0.68	0.68	0.01	0.00	29.77
6	0.74	0.73	0.01	0.00	32.09
7	0.72	0.72	0.01	0.00	32.86
8	0.70	0.70	0.01	0.00	31.02
9	0.67	0.66	0.01	0.00	28.03
10	0.66	0.65	0.01	0.00	28.94
11	0.54	0.58	0.03	0.00	22.59
12	0.58	0.58	0.01	0.00	23.57
13	0.54	0.56	0.02	0.00	21.23
14	0.53	0.54	0.01	0.00	20.08
15	0.52	0.54	0.01	0.00	20.47
16	0.52	0.52	0.01	0.00	19.53
17	0.52	0.53	0.01	0.00	19.42
18	0.52	0.54	0.01	0.00	20.31
19	0.52	0.54	0.01	0.00	20.29
20	0.51	0.53	0.01	0.00	19.72
21	0.51	0.53	0.01	0.00	19.81
22	0.50	0.51	0.01	0.00	18.39
23	0.48	0.49	0.01	0.00	17.08
24	0.49	0.51	0.01	0.00	18.42
25	0.51	0.52	0.01	0.00	18.93
26	0.50	0.53	0.01	0.00	18.74
27	0.50	0.51	0.01	0.00	18.59
28	0.50	0.51	0.01	0.00	18.17
29	0.48	0.49	0.01	0.00	17.87
30	0.50	0.51	0.01	0.00	18.47

Min	0.48	0.49	0.01	0.00	17.08
Max	0.78	0.78	0.01	0.00	35.64
Mean	0.57	0.58	0.01	0.00	23.10
KAF					1.375

Parameter Description

GJ Daily Mean Canal Gage Height (feet)
 GJ1 Alternate Daily Mean Canal Gage Height (feet)
 GJ_E Canal Gage Height, Downstream, Shift (feet)
 HJ Canal Shift (feet)
 QJ Daily Mean Canal Discharge (cfs)

Station CONE Courtland Canal at State Line, NE
Data for month of OCT, 2005

DAY	GJ	GJ1	GJ_B	HJ	QJ
1	0.53	0.54	0.01	0.00	20.43
2	0.54	0.56	0.01	0.00	21.69
3	0.56	0.58	0.01	0.00	22.68
4	0.55	0.56	0.01	0.00	21.36
5	0.53	0.53	0.01	0.00	19.36
6	0.49	0.49	0.01	0.00	17.32
7	0.50	0.51	0.01	0.00	18.49
8	0.53	0.55	0.01	0.00	20.67
9	0.56	0.58	0.01	0.00	22.58
10	0.58	0.60	0.01	0.00	24.16
11	0.61	0.63	0.01	0.00	26.38
12	0.77	0.76	0.01	0.00	35.10
13	0.46	0.76	0.01	0.00	35.30
14	0.02	0.75	0.01	0.00	34.45
15	0.02	0.72	0.01	0.00	32.45
16	0.02	0.71	0.01	0.00	31.47
17	0.02	0.71	0.01	0.00	31.57
18	0.02	0.70	0.01	0.00	31.04
19	0.02	0.69	0.01	0.00	30.40
20	0.02	0.79	0.01	0.00	37.74
21	0.02	0.81	0.01	0.00	38.51
22	0.02	0.78	0.01	0.00	36.47
23	0.02	0.76	0.01	0.00	34.86
24	0.02	0.74	0.01	0.00	33.73
25	0.02	0.74	0.01	0.00	33.84
26	0.02	0.76	0.01	0.00	34.88
27	0.02	0.76	0.01	0.00	35.46
28	0.02	0.77	0.01	0.00	35.62
29	0.02	0.78	0.01	0.00	36.53
30	0.02	0.79	0.01	0.00	37.62
31	0.02	0.78	0.01	0.00	36.86

Min	0.02	0.49	0.01	0.00	17.32
Max	0.77	0.81	0.01	0.00	38.51
Mean	0.24	0.68	0.01	0.00	29.97
KAF					1.843

Parameter Description

- GJ Daily Mean Canal Gage Height (feet)
- GJ1 Alternate Daily Mean Canal Gage Height (feet)
- GJ_B Canal Gage Height, Downstream, Shift (feet)
- HJ Canal Shift (feet)
- QJ Daily Mean Canal Discharge (cfs)

Courtland Canal, Mile 34.8

Courtland Stateline - 15 cfs -1 day

Jan 2005	Discharge QJ
1	42.75
2	50.07
3	40.14
4	38.63
5	26.76
6	14.58
7	11.85
8	16.88
9	21.32
10	21.99
11	17.54
12	15.08
13	17.56
14	23.16
15	23.64
16	21.77
17	20.25
18	19.89
19	20.10
20	19.54
21	24.69
22	28.95
23	29.55
24	28.97
25	33.42
26	33.99
27	42.11
28	47.88
29	52.23
30	53.09
31	51.12
Total	909.5
cfs AF	1804.0

Courtland Canal, Mile 34.8

Courtland Stateline - 15 cfs -1 day

Feb 2005	Discharge QJ
1	53.43
2	57.91
3	60.14
4	65.42
5	67.04
6	74.68
7	79.22
8	48.58
9	47.90
10	46.47
11	46.93
12	49.40
13	68.79
14	82.80
15	81.48
16	89.40
17	79.19
18	69.10
19	62.41
20	60.59
21	60.75
22	58.18
23	56.13
24	54.00
25	52.12
26	52.16
27	52.00
28	53.00
Total	cfs AF
	1729.2221 3429.9

Courtland 34.8

MAR-2005 CONE, -15cts, -1 Day

DAY	QJ
1	54.42
2	52.42
3	56.42
4	56.93
5	55.85
6	55.5
7	55.78
8	53.89
9	52.01
10	52.32
11	52.74
12	49.78
13	50.26
14	49.54
15	48.25
16	49.18
17	49.93
18	50.51
19	50.43
20	47.85
21	48.47
22	64.96
23	105.03
24	111.63
25	109.94
26	96.19
27	85.94
28	81.82
29	83.96
30	80.55
31	78.78
Min	47.85
Max	111.63
KAF	3950

Courtland 34.8

APR-2005 CONE, -15cfs, -1 Day

DAY	QJ
1	81.65
2	84.20
3	80.84
4	78.23
5	75.93
6	74.45
7	77.46
8	85.47
9	183.34
10	175.77
11	122.33
12	110.43
13	118.15
14	136.60
15	123.01
16	105.11
17	99.20
18	93.22
19	90.40
20	89.59
21	86.50
22	83.82
23	78.77
24	75.52
25	74.47
26	75.75
27	74.53
28	73.59
29	76.09
30	77.46

Min	73.59
Max	183.34
KAF	5677

Courtland 34.8

MAY-2005 CONE, -15cfs, -1 Day

DAY	QJ
1	75.56
2	74.55
3	71.94
4	68.91
5	67.19
6	68.43
7	69.89
8	70.94
9	69.50
10	64.96
11	63.96
12	60.30
13	74.83
14	137.35
15	107.72
16	71.64
17	61.97
18	57.34
19	54.31
20	49.58
21	46.83
22	47.59
23	42.91
24	40.02
25	39.43
26	37.89
27	38.72
28	37.47
29	36.02
30	40.67
31	41.60
Min	36.02
Max	137.35
KAF	3749

Courtland 34.8

JUN-2005 CONE, -15cfs, -1 Day

DAY	QJ
1	43.58
2	48.69
3	51.19
4	68.16
5	92.70
6	178.01
7	209.06
8	114.89
9	71.84
10	53.09
11	56.94
12	90.18
13	120.93
14	117.73
15	93.12
16	70.05
17	43.90
18	30.41
19	135.31
20	174.63
21	84.42
22	25.08
23	19.85
24	29.12
25	34.64
26	31.19
27	10.83
28	0
29	0
30	0

Canal checked on 6-20-05
Used DCP Data 6/20 - 6/30

Min	0.00
Max	209.06
KAF	4164

Courtland 34.8

JUL-2005 CONE, -15cfs, -1 Day

DAY	QJ
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0
29	0
30	0
31	0.00
Min	0.00
Max	0.00
KAF	0

Courtland 34.8

SEP-2005 CONE, -15cfs, -1 Day

DAY	QJ	
1	15.32	
2	29.67	
3	29.12	
4	31.47	
5	35.75	
6	40.02	Sep 1-12 DCP DATA
7	39.20	
8	37.68	
9	39.06	
10	34.23	
11	33.26	
12	17.59	
13	6.57	
14	6.23	
15	5.08	Sep 13-30 Estimated
16	5.47	Canal on bottom
17	4.53	
18	4.42	
19	5.31	
20	5.29	
21	4.72	
22	4.81	
23	3.19	
24	2.05	
25	3.42	
26	3.93	
27	3.74	
28	3.59	
29	3.17	
30	2.47	

Min	2.05
Max	40.02
KAF	913

NKAO - MFO
DCP Data

Courtland Canal, Mile 38.0

Jun-05

DAY	UPSTREAM GAGE HEIGHT	SHIFT	DISCHARGE (CFS)
1	0.07		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	0.00		0.00
15	0.00		0.00
16	0.00		0.00
17	0.00		0.00
18	0.00		0.00
19	0.00		0.00
20	0.65		99.59
21	0.91		136.32
22	0.75		92.65
23	0.89		123.90
24	0.94		134.96
25	0.94		134.13
26	0.94		134.07
27	1.18		199.24
28	1.49		290.66
29	1.78		391.09
30	1.91		436.32

MIN. DISCHARGE
0.00

MAX. DISCHARGE
436.32

MEAN DISCHARGE
72.43

TOTAL ACRE-FEET
4,310

NKAO - MFO
DCP Data

Courtland Canal, Mile 38.0

Jul-2005

DAY	UPSTREAM GAGE HEIGHT	SHIFT	DISCHARGE (CFS)
1	1.82		404.82
2	1.51		298.35
3	1.36		249.97
4	1.45		278.31
5	1.52		301.51
6	1.51		297.72
7	1.55		310.16
8	1.49		290.86
9	1.43		271.17
10	1.42		268.39
11	1.51		298.01
12	1.63		337.71
13	1.60		326.10
14	1.57		317.84
15	1.62		334.08
16	1.64		339.96
17	1.64		339.37
18	0.84		133.88
19	0.52		48.45
20	0.69		80.71
21	0.97		144.77
22	1.27		224.87
23	1.58		320.84
24	1.66		346.23
25	1.77		385.39
26	0.92		155.55
27	0.54		51.48
28	0.52		48.76
29	0.51		47.23
30	0.51		47.26
31	0.51		46.97

MIN. DISCHARGE
46.97

MAX. DISCHARGE
404.82

MEAN DISCHARGE
236.99

TOTAL ACRE-FEET
14,572

NKAO - MFO
DCP Data

Courtland Canal, Mile 38.0

Jul-2005

DAY	UPSTREAM GAGE HEIGHT	SHIFT	DISCHARGE (CFS)
1	1.82		404.82
2	1.51		298.35
3	1.36		249.97
4	1.45		278.31
5	1.52		301.51
6	1.51		297.72
7	1.55		310.16
8	1.49		290.86
9	1.43		271.17
10	1.42		268.39
11	1.51		298.01
12	1.63		337.71
13	1.60		326.10
14	1.57		317.84
15	1.62		334.08
16	1.64		339.96
17	1.64		339.37
18	0.84		133.88
19	0.52		48.45
20	0.69		80.71
21	0.97		144.77
22	1.27		224.87
23	1.58		320.84
24	1.66		346.23
25	1.77		385.39
26	0.92		155.55
27	0.54		51.48
28	0.52		48.76
29	0.51		47.23
30	0.51		47.26
31	0.51		46.97

MIN. DISCHARGE
46.97

MAX. DISCHARGE
404.82

MEAN DISCHARGE
236.99

TOTAL ACRE-FEET
14,572

NKAO - MFO
DCP Data

Courtland Canal, Mile 38.0

Aug-2005

DAY	UPSTREAM GAGE HEIGHT	SHIFT	DISCHARGE (CFS)	
1	0.7		83.28	
2	0.96		141.58	
3	1.29		232.02	
4	1.6		328.90	
5	1.73		369.98	
6	1.70		362.41	
7	1.68		352.88	
8	1.53		304.63	
9	1.45		276.55	
10	1.33		240.53	
11	1.18		198.46	
12	1.06		165.14	
13	0.65		77.41	
14	0.48		41.76	
15	0.48		41.33	
16	0.48		41.20	
17	0.48		41.39	
18	0.48		41.84	
19	0.48		41.92	
20	0.48		41.62	
21	0.48		41.64	
22	0.58		58.85	
23	0.20		20.84	Canal Off
24				
25				
26				
27				
28				
29				
30				
31				

MIN. DISCHARGE
20.84

MAX. DISCHARGE
369.98

MEAN DISCHARGE
154.18

TOTAL ACRE-FEET
7,034