

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

McCook Field Office  
1706 West 3<sup>rd</sup> Street  
McCook, NE 69001

IN REPLY REFER TO:

NK-410  
PRJ-23.00 GF

FEB 24 2006

Kansas State Board of Agriculture  
Division of Water Resources  
Technical Services Section  
901 S. Kansas Avenue, Second Floor  
Topeka, KS 66612-1283

Subject: Monthly Water Distribution - 2005

Gentlemen:

Enclosed are 2005 canal discharge records and "Monthly Water Distribution" reports for the canals and irrigation districts in the Nebraska-Kansas Projects.

Sincerely,

**MARVIN R. SWANDA**

Marvin R. Swanda  
Office Manager

Enclosures - 37

bc: NK-410-General File  
NK-410-Dale  
(w/o encl to each)

WBR:\conway:2-23-06:308-345-1029:NK-410  
M:\USR\ANYBODY\WATER\OPERATION\MWD\MWDLETTER\TOPEKA05mwd.doc

Q'41

**CANAL WAS NOT  
IN OPERATION  
DURING THE 2005  
SEASON**

*CALBERTSON EXT*

**CANAL WAS NOT  
IN OPERATION  
DURING THE 2005  
SEASON**

MEEKER DRIFTWOOD

**CANAL WAS NOT  
IN OPERATION  
DURING THE 2005  
SEASON**

*RED WILLOW*

NKAO - MFO  
DCP Data

Cambridge Canal

Jun-05

	UPSTREAM GAGE HEIGHT	DOWNSTREAM GAGE HEIGHT	SHIFT	DISCHARGE (CFS)
1				
3	0.00	0.00		0.00
4	0.00	0.00		0.00
5	0.00	0.00		0.00
6	0.00	0.00		0.00
7	0.00	0.00		0.00
8	0.00	0.00		0.00
9	0.00	0.00		0.00
10	0.00	0.00		0.00
11	0.00	0.00		0.00
12	0.00	0.00		0.00
13	0.00	0.00		0.00
14	0.00	0.00		0.00
15	0.00	0.00		0.00
16	0.00	0.00		0.00
17	0.00	0.00		0.00
18	0.00	0.00		0.00
19	0.00	0.00		0.00
20	0.00	0.00		55.00
21	0.00	0.00		80.00
22	0.00	0.00		70.00
23	0.00	0.00		70.00
24	1.05	0.03		63.22
25	1.06	0.03		64.83
26	1.06	0.03		64.97
27	1.11	0.03		60.67
28	1.48	0.03		113.41
29	1.82	0.03		140.93
30	1.82	0.13		156.99

MIN. DISCHARGE  
55

MAX. DISCHARGE  
156.99

MEAN DISCHARGE  
85.00

TOTAL ACRE-FEET  
1,855

NKAO - MFO  
DCP Data

Cambridge Canal

Jul-2005

DAY	UPSTREAM GAGE HEIGHT	DOWNSTREAM GAGE HEIGHT	SHIFT	DISCHARGE (CFS)
1	1.90	0.22		167.57
2	1.96	0.22		168.22
3	1.93	0.24		171.99
4	2.00	0.33		181.87
5	2.02	0.36		184.52
6	2.00	0.34		182.18
7	1.98	0.30		179.56
8	1.95	0.24		175.37
9	1.93	0.25		171.72
10	1.98	0.23		172.03
11	1.98	0.29		179.43
12	2.09	0.36		187.08
13	2.08	0.42		192.36
14	2.12	0.44		190.37
15	1.95	0.23		174.24
16	1.92	0.19		171.19
17	1.93	0.19		171.46
18	1.93	0.19		171.73
19	1.94	0.19		174.13
20	1.99	0.22		180.88
21	2.04	0.27		188.03
22	1.88	0.21		165.22
23	1.80	0.16		154.11
24	1.84	0.16		156.36
25	1.95	0.19		175.49
26	1.87	0.18		163.34
27	1.81	0.16		154.77
28	1.85	0.16		161.37
29	1.71	0.16		140.60
30	1.63	0.16		130.32
31	1.65	0.16		131.83

MIN. DISCHARGE  
130.32

MAX. DISCHARGE  
192.36

MEAN DISCHARGE  
169.98

TOTAL ACRE-Feet  
10,452

NKAO - MFO  
DCP Data

Cambridge Canal

Aug-2005

DAY	UPSTREAM GAGE HEIGHT	DOWNSTREAM GAGE HEIGHT	SHIFT	DISCHARGE (CFS)
1	1.84	0.16		159.08
2	2.05	0.29		188.56
3	2.20	0.57		210.26
4	2.25	0.58		209.68
5	1.95	0.29		174.96
6	1.85	0.17		160.14
7	1.83	0.17		158.46
8	1.86	0.17		161.58
9	1.90	0.18		167.42
10	1.94	0.21		173.43
11	1.97	0.24		177.88
12	1.72	0.19		143.71
13	1.48	0.16		112.47
14	1.49	0.16		113.00
15	1.45	0.20		108.61
16	1.41	0.16		103.55
17	1.14	0.16		74.28
18	0.97	0.15		55.94
19	0.98	0.15		56.97
20	0.99	0.15		58.18
21	0.99	0.15		58.23
22	1.22	0.15		82.78
23	1.33	0.15		93.78
24	1.32	0.14		92.54
25	1.41	0.14		103.48
26	1.33	0.14		94.52
27	1.25	0.14		84.91
28	1.27	0.14		87.04
29	1.48	0.14		112.19
30	1.58	0.14		124.55
31	0.61	0.14		41.33

MIN. DISCHARGE  
41.333

MAX. DISCHARGE  
210.26

MEAN DISCHARGE  
120.79

TOTAL ACRE-FEET  
7,425

**CANAL WAS NOT  
IN OPERATION  
DURING THE 2005  
SEASON**

BARTLEY CANAL



CANAL WAS NOT  
IN OPERATION  
DURING THE 2005  
SEASON

FRANKLIN CANAL

NKAO - MFO  
DCP Data

Superior Canal

Jun-05

DAY	UPSTREAM GAGE HEIGHT	DOWNSTREAM GAGE HEIGHT	SHIFT	DISCHARGE (CFS)
1	0.00	0.00		0.00
2	0.00	0.00		0.00
3	0.00	0.00		0.00
4	0.00	0.00		0.00
5	0.00	0.00		0.00
6	0.73	0.00		29.59
7	1.16	0.07		54.26
8	1.03	0.01		43.75
9	1.01	0.01		41.83
10	0.83	0.01		31.01
11	0.76	0.00		25.49
12	1.00	0.00		41.99
13	0.97	0.00		38.96
14	0.87	0.00		32.47
15	0.87	0.00		32.29
16	0.98	0.00		40.03
17	1.03	0.00		44.02
18	1.11	0.00		50.27
19	1.11	0.00		50.35
20	1.15	0.00		53.54
21	1.10	0.00		49.51
22	1.04	0.00		44.59
23	1.05	0.00		45.47
24	1.15	0.00		53.67
25	1.05	0.00		45.31
26	1.08	0.00		48.16
27	1.14	0.00		52.58
28	1.11	0.00		50.35
29	1.03	0.00		43.79
30	1.06	0.00		45.92

MIN. DISCHARGE  
0.00

MAX. DISCHARGE  
54.26

MEAN DISCHARGE  
41.89

TOTAL ACRE-Feet  
2,160

NKAO - MFO  
DCP Data

Superior Canal

Jul-2005

DAY	UPSTREAM GAGE HEIGHT	DOWNSTREAM GAGE HEIGHT	SHIFT	DISCHARGE (CFS)
1	1.05	0.00		45.03
2	1.07	0.00		47.13
3	1.03	0.00		43.96
4	1.06	0.00		45.92
5	1.05	0.00		45.33
6	1.04	0.00		44.33
7	1.00	0.00		41.29
8	0.99	0.00		41.75
9	0.92	0.00		35.44
10	1.05	0.00		45.91
11	0.95	0.00		38.42
12	1.05	0.00		45.40
13	0.97	0.00		38.97
14	0.97	0.00		39.03
15	0.88	0.00		33.18
16	0.81	0.00		28.32
17	0.74	0.00		24.54
18	0.79	0.00		27.24
19	0.73	0.00		23.49
20	0.72	0.00		22.85
21	0.65	0.00		19.24
22	0.60	0.00		16.83
23	0.49	0.00		11.78
24	0.44	0.00		9.99
25	0.48	0.00		11.30
26	0.97	0.00		39.92
27	0.89	0.00		33.70
28	0.81	0.00		29.02
29	0.71	0.00		22.83
30	0.63	0.00		18.52
31	0.81	0.00		28.68

MIN. DISCHARGE  
9.99

MAX. DISCHARGE  
47.13

MEAN DISCHARGE  
32.24

TOTAL ACRE-FEET  
1,982

NKAO - MFO  
DCP Data

Superior Canal

Aug-2005

DAY	UPSTREAM GAGE HEIGHT	DOWNSTREAM GAGE HEIGHT	SHIFT	DISCHARGE (CFS)
1	0.72	0.00		23.20
2	0.68	0.00		20.56
3	0.57	0.00		15.30
4	0.57	0.00		15.04
5	0.60	0.00		16.59
6	0.59	0.00		16.00
7	0.56	0.00		14.75
8	0.51	0.00		12.73
9	0.45	0.00		10.23
10	0.41	0.00		8.73
11	0.42	0.00		8.94
12	0.45	0.00		10.03
13	0.68	0.00		20.98
14	0.79	0.00		27.48
15	0.60	0.00		16.77
16	0.56	0.00		14.65
17	0.57	0.00		15.40
18	0.53	0.00		13.41
19	0.35	0.00		6.45
20	0.00	0.00		0.00
21	0.00	0.00		0.00
22	0.12	0.00		0.00
23	0.05	0.00		0.00
24	0.05	0.00		0.00
25	0.04	0.00		0.00
26	0.00	0.00		0.00
27	0	0.00		0.00
28	0	0.00		0.00
29	0	0.00		0.00
30	0	0.00		0.00
31	0	0.00		0.00

Canal OFF

MIN. DISCHARGE  
0.00

MAX. DISCHARGE  
27.48

MEAN DISCHARGE  
11.49

TOTAL ACRE-FEET  
570

CANAL WAS NOT  
IN OPERATION  
DURING THE 2005  
SEASON

FRANKLIN Pump

CANAL WAS NOT  
IN OPERATION  
DURING THE 2005  
SEASON

NAPONEE CANAL

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	77.86
27	82.23
28	83.09
29	81.12
30	83.43
31	87.91
Total	1858.02
	cfs AF 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	94.95
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 GFS +1 day

DAY	GI
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	113.92
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

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Min	103.59
Max	213.34
KAF	7430

Courtland 0.7

MAY-2005 CONE + 15 CFS :1 day

DAY	CJ
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	91.87
16	87.34
17	84.31
18	79.58
19	78.83
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	88.94
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	25.6
3	28.09
4	0.00
5	0.00
6	0.00
7	0.00
8	0.00
9	21.98
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	CJ
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	95.46
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	CU
1	41.06
2	39.83
3	38.35
4	38.77
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

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Min	27.05
Max	43.09
KAF	1941

Courtland 0.7

OCT-2005 CONE + 10 CFS +1 day

DAY	Q1
1	29.59
2	30.08
3	31.56
4	30.36
5	37.32
6	38.49
7	36.67
8	32.38
9	34.15
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	45.52
28	46.53
29	47.62
30	46.86
31	45.83
Min	27.32
Max	48.51
KAF	2488



ARC040 V1 4B 04-DEC-1987

Station 208E Courtland Canal at State Line, MD  
Data for month of JAN, 1988

DAY	G3	G3A	G3_B	H3	G3
1	1.11	1.11	0.00	0.00	15.07
2	0.87	0.86	0.00	0.00	15.14
3	0.81	0.80	0.00	0.00	15.02
4	0.84	0.84	0.00	0.00	15.00
5	0.84	0.81	0.00	0.00	15.00
6	0.81	0.84	0.00	0.00	15.00
7	0.84	0.81	0.00	0.00	15.00
8	0.80	0.81	0.00	0.00	15.00
9	0.81	0.81	0.00	0.00	15.00
10	0.81	0.81	0.00	0.00	15.00
11	0.81	0.81	0.00	0.00	15.00
12	0.81	0.81	0.00	0.00	15.00
13	0.81	0.81	0.00	0.00	15.00
14	0.81	0.81	0.00	0.00	15.00
15	0.81	0.81	0.00	0.00	15.00
16	0.81	0.81	0.00	0.00	15.00
17	0.81	0.81	0.00	0.00	15.00
18	0.81	0.81	0.00	0.00	15.00
19	0.81	0.81	0.00	0.00	15.00
20	0.81	0.81	0.00	0.00	15.00
21	0.81	0.81	0.00	0.00	15.00
22	0.81	0.81	0.00	0.00	15.00
23	0.81	0.81	0.00	0.00	15.00
24	0.81	0.81	0.00	0.00	15.00
25	0.81	0.81	0.00	0.00	15.00
26	0.81	0.81	0.00	0.00	15.00
27	0.81	0.81	0.00	0.00	15.00
28	0.81	0.81	0.00	0.00	15.00
29	0.81	0.81	0.00	0.00	15.00
30	0.81	0.81	0.00	0.00	15.00
31	0.81	0.81	0.00	0.00	15.00
MEAN	0.81	0.81	0.00	0.00	15.00
MAX	1.11	1.11	0.00	0.00	15.14
MIN	0.81	0.81	0.00	0.00	15.00
RAF					0.147

Parameter Description

- G3 Daily Mean Canal Gage Height (feet)
- G3A Alternate Daily Mean Canal Gage Height (feet)
- G3\_B Canal Gage Height, Downstream, Shift (feet)
- H3 Canal Shift (feet)
- G3 Daily Mean Canal Discharge (cfs)

AKC046 V3 03 08-Dec-1987

STATION CODE            Courtland Canal at State Line, NE  
Data for month of FEB, 2005

DAY	GS	GS1	GS_E	QS	QC
1	0.00	1.20	0.00	0.00	77.15
2	0.00	1.22	0.00	0.00	78.17
3	0.00	1.17	0.00	0.00	81.00
4	0.00	1.24	0.00	0.00	81.85
5	0.00	1.05	0.00	0.00	78.01
6	0.00	1.10	0.00	0.00	80.20
7	0.00	1.01	0.00	0.00	82.81
8	0.00	0.91	0.00	0.00	81.81
9	0.00	0.77	0.00	0.00	77.01
10	0.00	1.08	0.00	0.00	80.80
11	0.00	1.11	0.00	0.00	81.80
12	0.00	1.20	0.00	0.00	81.79
13	0.00	1.42	0.00	0.00	87.81
14	0.00	1.40	0.00	0.00	88.48
15	0.00	1.47	0.00	0.00	104.41
16	0.00	1.29	0.00	0.00	94.14
17	0.00	1.31	0.00	0.00	84.14
18	0.00	1.04	0.00	0.00	77.41
19	0.00	1.13	0.00	0.00	78.15
20	0.00	1.22	0.00	0.00	78.05
21	0.00	1.20	0.00	0.00	78.18
22	0.00	1.20	0.00	0.00	71.13
23	0.00	1.18	0.00	0.00	78.00
24	0.00	1.16	0.00	0.00	77.13
25	0.00	1.14	0.00	0.00	87.13
26	0.00	0.40	0.00	-----	87.00
27	0.00	0.00	0.00	-----	88.00
28	0.00	0.00	0.00	-----	89.42
29	0.00	0.00	0.00	-----	-----
30	0.00	0.00	0.00	0.00	81.40
MEAN	0.48	1.47	0.00	0.00	104.40
MEAN	0.00	1.07	0.00	0.00	78.79
MAX					81.85

Parameter Descriptions

- GS     Daily Mean Canal Gage Height (feet)
- GS1   Alternate Daily Mean Canal Gage Height (feet)
- GS\_E   Canal Gage Height, Downstream, Shift (feet)
- QS     Canal Shift (feet)
- QC     Daily Mean Canal Discharge (cfs)

ARC040 V1.4E 01-Dec-1997

STATION CODE COURTLAND CANAL AT BRIDGE #102, DE  
DATA FOR MONTH OF MAR, 2001

DAY	GS	GS1	GS_E	SH	DD
1	1.10	1.10	1.00	0.00	71.01
2	1.08	1.08	1.00	0.00	71.01
3	1.07	1.07	1.00	0.00	71.01
4	1.07	1.07	1.00	0.00	71.01
5	1.07	1.07	1.00	0.00	71.01
6	1.07	1.07	1.00	0.00	71.01
7	1.07	1.07	1.00	0.00	71.01
8	1.07	1.07	1.00	0.00	71.01
9	1.07	1.07	1.00	0.00	71.01
10	1.07	1.07	1.00	0.00	71.01
11	1.07	1.07	1.00	0.00	71.01
12	1.07	1.07	1.00	0.00	71.01
13	1.07	1.07	1.00	0.00	71.01
14	1.07	1.07	1.00	0.00	71.01
15	1.07	1.07	1.00	0.00	71.01
16	1.07	1.07	1.00	0.00	71.01
17	1.07	1.07	1.00	0.00	71.01
18	1.07	1.07	1.00	0.00	71.01
19	1.07	1.07	1.00	0.00	71.01
20	1.07	1.07	1.00	0.00	71.01
21	1.07	1.07	1.00	0.00	71.01
22	1.07	1.07	1.00	0.00	71.01
23	1.07	1.07	1.00	0.00	71.01
24	1.07	1.07	1.00	0.00	71.01
25	1.07	1.07	1.00	0.00	71.01
26	1.07	1.07	1.00	0.00	71.01
27	1.07	1.07	1.00	0.00	71.01
28	1.07	1.07	1.00	0.00	71.01
29	1.07	1.07	1.00	0.00	71.01
30	1.07	1.07	1.00	0.00	71.01
31	1.07	1.07	1.00	0.00	71.01
-----					-----
Min	1.07	1.07	1.00	0.00	71.01
Max	1.08	1.08	1.00	0.00	71.01
Mean	1.07	1.07	1.00	0.00	71.01
RAF					4.920

Parameter Description

- GS Daily Mean Canal Gage Height (feet)
- GS1 Alternate Daily Mean Canal Gage Height (feet)
- GS\_E Canal Gage Height, Downstream, Shift (feet)
- SH Canal Shift (feet)
- DD Daily Mean Canal Discharge (cfs)

ARC040 V1.41 08-Dec-1997

Station: 0001      Courtyard Canal at Diste Line, WF  
Data for month of SEP, 1995

DAY	GJ	GJ1	GJ_E	HJ	QJ
1	1.37	1.42	0.00	0.00	88.14
2	1.37	1.41	0.00	0.00	88.84
3	1.36	1.38	0.00	0.00	89.11
4	1.36	1.39	0.00	0.00	89.32
5	1.36	1.38	0.00	0.00	89.47
6	1.35	1.37	0.00	0.00	89.46
7	1.35	1.44	0.00	0.00	89.47
8	1.34	1.44	0.00	0.00	89.34
9	1.34	0.11	0.00	0.00	89.71
10	1.33	1.34	0.00	0.00	89.30
11	1.33	1.35	0.00	0.00	89.43
12	1.33	1.31	0.00	0.00	89.12
13	1.33	1.34	0.00	0.00	89.61
14	1.33	1.34	0.00	0.00	89.51
15	1.33	1.30	0.00	0.00	89.11
16	1.33	1.36	0.00	0.00	89.20
17	1.33	1.31	0.00	0.00	89.22
18	1.33	1.43	0.00	0.00	89.40
19	1.33	1.42	0.00	0.00	89.55
20	1.32	1.45	0.00	0.00	89.50
21	1.33	1.42	0.00	0.00	88.82
22	1.33	1.36	0.00	0.00	88.77
23	1.33	1.34	0.00	0.00	88.52
24	1.33	1.35	0.00	0.00	88.47
25	1.33	1.36	0.00	0.00	88.73
26	1.33	1.33	0.00	0.00	88.11
27	1.33	1.34	0.00	0.00	88.33
28	1.33	1.34	0.00	0.00	81.65
29	1.33	1.37	0.00	0.00	82.42
30	1.33	1.33	0.00	0.00	80.53
-----					-----
Min	1.30	1.31	0.00	0.00	88.15
Max	1.36	1.46	0.00	0.00	89.54
Mean	1.33	1.35	0.00	0.00	88.19
TAF					8.537

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)

AR26-6 V1.45 04-Dec-1987

STATION CODE      Fourland Canal at State - 46. 00  
DATA FOR MONTH OF MAY, 1987

DATE	GS	GS1	GS_E	SH	DD
1	1.17	1.11	0.01	0.01	101.15
2	1.13	1.01	0.01	0.00	101.84
3	1.17	1.06	0.00	0.00	101.77
4	1.20	1.02	0.01	0.01	101.87
5	1.24	1.04	0.01	0.01	101.71
6	1.26	1.01	0.01	0.01	101.89
7	1.24	1.03	0.01	0.01	101.74
8	1.20	1.01	0.00	0.00	101.80
9	1.24	1.07	0.00	0.01	101.87
10	1.22	1.07	0.00	0.01	101.71
11	1.17	1.01	0.00	0.01	101.71
12	1.13	1.02	0.01	0.01	101.83
13	1.11	1.03	0.01	0.00	101.71
14	1.09	1.02	0.00	0.00	101.84
15	1.11	1.00	0.01	0.00	101.87
16	1.08	1.04	0.01	0.00	101.71
17	1.11	1.04	0.01	0.00	101.81
18	1.14	0.98	0.01	0.00	101.81
19	1.10	1.01	0.01	0.01	101.84
20	1.08	1.04	0.01	0.00	101.80
21	1.06	1.04	0.01	0.00	101.89
22	1.03	1.04	0.01	0.00	101.83
23	0.99	1.01	0.01	0.00	101.81
24	0.98	1.00	0.01	0.00	101.83
25	0.97	0.99	0.01	0.00	101.72
26	0.95	1.00	0.01	0.00	101.87
27	0.97	0.98	0.01	0.00	101.81
28	0.95	0.99	0.01	0.00	101.87
29	1.01	1.01	0.01	0.00	101.80
30	1.01	1.01	0.01	0.00	101.80
31	1.03	1.01	0.01	0.00	101.84
32	1.03	1.01	0.01	0.00	101.84
Min	0.95	0.96	0.00	0.00	101.02
Max	1.25	1.15	0.01	0.00	101.89
Mean	1.13	1.06	0.01	0.00	101.84
MAP					4.60E

Parameter Description

- GS      Daily Mean Canal Gage Height (feet)
- GS1    Alternate Daily Mean Canal Gage Height (feet)
- GS\_E   Canal Gage Height, Downstream, Shift (feet)
- SH     Canal Shift (feet)
- DD     Daily Mean Canal Discharge (cfs)

AR0040 V0.41 08-Dec-1997

STATION CODE: CANTON CANAL AT DATE LINE, MD  
DATA FOR MONTH OF JUNE 1997

DAY	GS	GL1	GL2	EQ	Q
1	1.71	1.71	0.00	0.00	117.71
2	1.71	1.71	0.00	0.00	117.71
3	1.71	1.71	0.00	0.00	117.71
4	1.71	1.71	0.00	0.00	117.71
5	1.71	1.71	0.00	0.00	117.71
6	1.71	1.71	0.00	0.00	117.71
7	1.71	1.71	0.00	0.00	117.71
8	1.71	1.71	0.00	0.00	117.71
9	1.71	1.71	0.00	0.00	117.71
10	1.71	1.71	0.00	0.00	117.71
11	1.71	1.71	0.00	0.00	117.71
12	1.71	1.71	0.00	0.00	117.71
13	1.71	1.71	0.00	0.00	117.71
14	1.71	1.71	0.00	0.00	117.71
15	1.71	1.71	0.00	0.00	117.71
16	1.71	1.71	0.00	0.00	117.71
17	1.71	1.71	0.00	0.00	117.71
18	1.71	1.71	0.00	0.00	117.71
19	1.71	1.71	0.00	0.00	117.71
20	1.71	1.71	0.00	0.00	117.71
21	1.71	1.71	0.00	0.00	117.71
22	1.71	1.71	0.00	0.00	117.71
23	1.71	1.71	0.00	0.00	117.71
24	1.71	1.71	0.00	0.00	117.71
25	1.71	1.71	0.00	0.00	117.71
26	1.71	1.71	0.00	0.00	117.71
27	1.71	1.71	0.00	0.00	117.71
28	1.71	1.71	0.00	0.00	117.71
29	1.71	1.71	0.00	0.00	117.71
30	1.71	1.71	0.00	0.00	117.71
MEAN	1.71	1.71	0.00	0.00	117.71
MAX	1.71	1.71	0.00	0.00	117.71
MIN	1.71	1.71	0.00	0.00	117.71
EQ	1.71	1.71	0.00	0.00	117.71

Parameter Description

- GS Daily Mean Canal Gage Height (feet)
- GL1 Alternate Daily Mean Canal Gage Height (feet)
- GL2 Canal Gage Height, Downstream, Shift (feet)
- EQ Canal Shift (feet)
- Q Daily Mean Canal Discharge (cfs)

AP0040 V1.4D 01-Dec-1997

INTERNAL GAGE Controlled Canal at State Line, HT  
Data for month of JULY 2001

DAY	GC	GC1	GC2	RS	QS
1	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00
Min	0.00	0.00	0.00	0.00	0.00
Max	1.60	1.60	0.00	0.00	167.49
Mean	0.09	0.09	0.00	0.00	14.52
RAF					0.892

Parameter Description

- GC Daily Mean Canal Gage Height (feet)
- GC1 Alternate Daily Mean Canal Gage Height (feet)
- GC2 Canal Gage Height Downstream, Shift (feet)
- RS Canal Shift (feet)
- QS Daily Mean Canal Discharge (cfs)





AR0646 V1 40 01 Dec 1997

STATION CODE: 1007280 Canal at State Line, HI  
 DATA FOR MONTH: 001, 1997

DAY	GJ	GJ1	GJ2	HS	QS
1	0.74	0.74	0.01	0.00	11.14
2	0.71	0.71	0.01	0.00	11.01
3	0.68	0.68	0.01	0.00	10.88
4	0.72	0.72	0.01	0.00	10.92
5	0.61	0.61	0.01	0.00	10.61
6	0.71	0.71	0.01	0.00	11.01
7	0.77	0.77	0.01	0.00	11.27
8	0.71	0.71	0.01	0.00	11.01
9	0.67	0.67	0.01	0.00	10.67
10	0.74	0.74	0.01	0.00	11.14
11	0.70	0.70	0.01	0.00	11.00
12	0.68	0.68	0.01	0.00	10.88
13	0.64	0.64	0.01	0.00	10.64
14	0.63	0.63	0.01	0.00	10.63
15	0.63	0.63	0.01	0.00	10.63
16	0.62	0.62	0.01	0.00	10.62
17	0.63	0.63	0.01	0.00	10.63
18	0.62	0.62	0.01	0.00	10.62
19	0.63	0.63	0.01	0.00	10.63
20	0.61	0.61	0.01	0.00	10.61
21	0.62	0.62	0.01	0.00	10.62
22	0.60	0.60	0.01	0.00	10.60
23	0.44	0.44	0.01	0.00	10.44
24	0.44	0.44	0.01	0.00	10.44
25	0.51	0.51	0.01	0.00	10.51
26	0.50	0.50	0.01	0.00	10.50
27	0.51	0.51	0.01	0.00	10.51
28	0.49	0.49	0.01	0.00	10.49
29	0.49	0.49	0.01	0.00	10.49
30	0.50	0.50	0.01	0.00	10.50
-----					
MIN	0.44	0.44	0.01	0.00	10.44
MAX	0.78	0.78	0.01	0.00	11.27
MEAN	0.57	0.56	0.01	0.00	10.57
RAF					1.275

Parameter Description

- GJ Daily Mean Canal Gage Height (feet)
- GJ1 Alternate Daily Mean Canal Gage Height (feet)
- GJ2 Canal Gage Height, Downstream, Shift (feet)
- HS Canal Shift (feet)
- QS 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	19.35
6	0.49	0.49	0.01	0.00	17.32
7	0.50	0.51	0.01	0.00	18.45
8	0.50	0.50	0.01	0.00	20.67
9	0.50	0.50	0.01	0.00	20.58
10	0.50	0.50	0.01	0.00	24.15
11	0.61	0.63	0.01	0.00	26.38
12	0.77	0.75	0.01	0.00	35.10
13	0.46	0.70	0.01	0.00	36.30
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	0.70	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	29.57
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
	1	49.15
	2	50.07
	3	40.14
	4	38.53
	5	28.75
	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	23.13
	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	52.33
	30	53.09
	31	51.12
Total	cfs	909.5
	AF	1804.0

Courtland Canal, Mile 34.8

Courtland Stateline - 15 cfs -1 day

Feb 2003	Discharge CJ
1	58.43
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	39.40
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 1729.2221 AF 3429.9

Courtland 34.8

MAR-2005 CONE 15cis, -1 Day

DAY	CJ
1	54.42
2	50.40
3	55.42
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	49.83
18	50.51
19	50.43
20	47.85
21	48.47
22	64.98
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	Q1
1	81.85
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	89.58
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

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Min	73.59
Max	183.34
KAF	5677

Courtland 34.8

MAY-2005      DONE, -15:cls, -1 Day

DAY	QJ
1	75.58
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 CDNE -15cfs, 1 Day

DAY	CJ
1	40.38
2	48.39
3	51.18
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	174.53
21	84.42
22	25.08
23	19.85
24	29.12
25	34.64
26	31.19
27	10.63
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-2025 CONE, -15cfs, -1 Day

DAY	CS
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	CG	
1	11.52	
2	29.67	
3	29.12	
4	21.47	
5	35.75	
6	40.02	Sep 1-12 DCP DATA
7	39.30	
8	31.08	
9	30.08	
10	34.23	
11	33.26	
12	17.59	
13	2.57	
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

Courtland 34.8

OCT-2005      CONE - 15 CFS -1 day

DAY	Q1
1	3.27
2	3.40
3	3.69
4	3.68
5	6.36
6	4.36
7	2.32
8	3.49
9	5.67
10	7.58
11	9.16
12	11.38
13	20.10
14	20.30
15	19.45
16	17.45
17	16.47
18	16.57
19	16.04
20	15.40
21	22.74
22	23.51
23	21.47
24	19.86
25	18.73
26	18.84
27	19.88
28	20.46
29	20.62
30	21.53
31	22.62
Min	2.32
Max	23.51
KAF	884

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

NKAG - MFO  
DKI Data

Courtland Canal, Mile 38.0

Jul-2005

DAY	UPSTREAM GAGE HEIGHT	SHIFT	DISCHARGE (CFS)
1	1.82		404.82
2	1.81		298.35
3	1.86		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	0.59		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  
DCF Data

Courtland Canal, Mile 38.0

Aug-2005

DAY	UPSTREAM GAGE HEIGHT	SHIPI	DISCHARGE (CFS)
1	0.7		33.78
2	0.96		141.58
3	1.20		135.02
4	1.1		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
24			
25			
26			
27			
28			
29			
30			
31			

Canal Off

MIN. DISCHARGE	MAX. DISCHARGE
20.84	369.98
MEAN DISCHARGE	TOTAL ACRE-FEET
154.18	7,034

ALMENA CANAL  
WAS NOT IN  
OPERATION DURING  
THE  
2005  
IRRIGATION SEASON