BROCKWAY
ENGINEERING
P.L.L.C.

Hydraulics
Hydrology
Water Resources

RECEIVED
JAN 14 2005
Department of Water Resources
Southern Region

January 13, 2005

Jim Stanton
Idaho Department of Water Resources
1341 Fillmore, Suite 200
Twin Falls, ID 83301

RE: Searl Transfer

Dear Jim:

Enclosed is a revised hydrologic impact and mitigation plan for the searl transfer from Rainbow Ranch. This analysis reflects the change in the pumping schedule due to the fact that the transfer s expected to be approved for the 2005 irrigation season.

Thank you, and please call with any questions that you may have.

Sincerely,

Charles E. Brockway, P.E., Ph.D.

Enclosure

cc: Craig Searl

CHARLES E. BROCKWAY, PH.D., P.E.

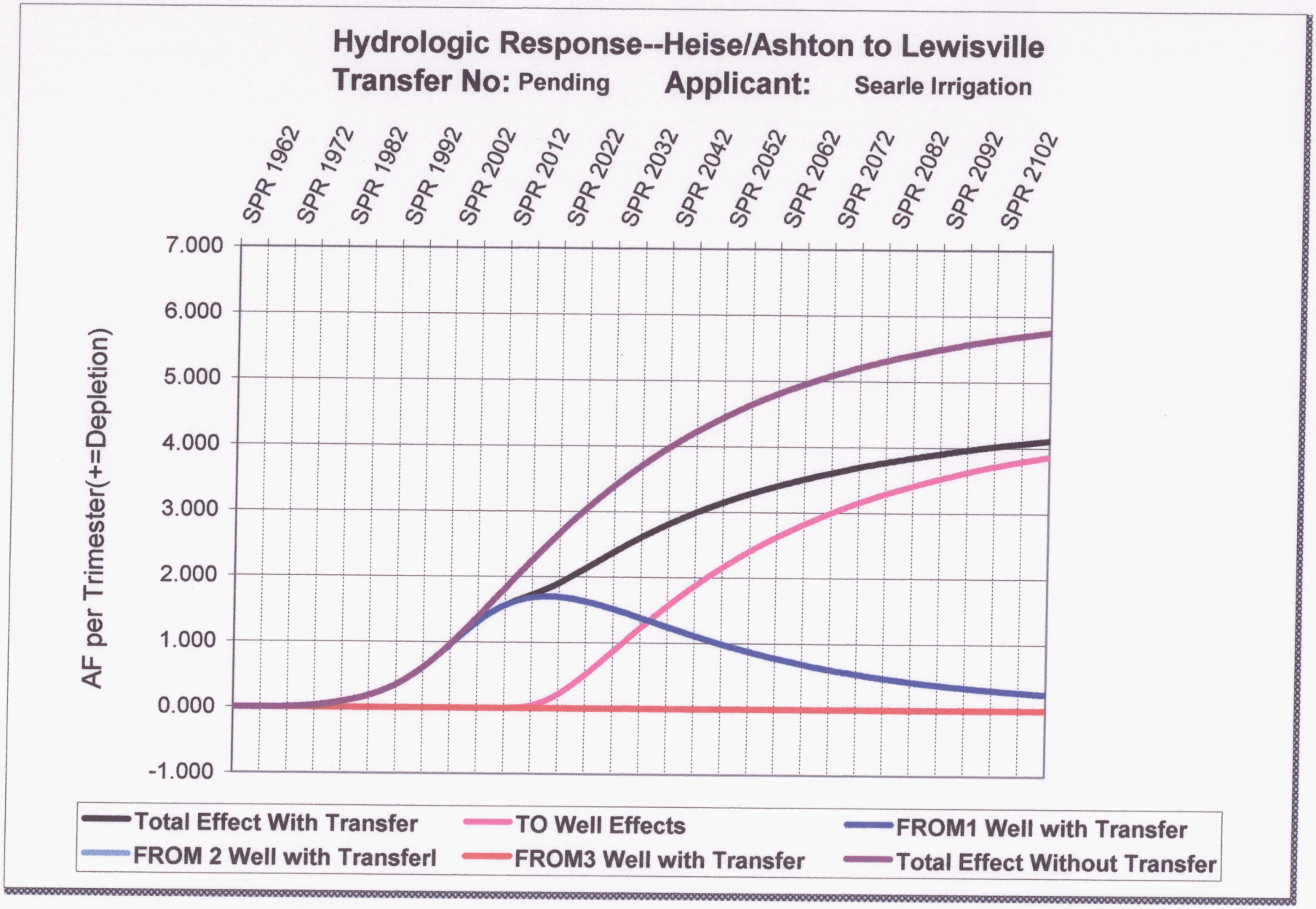
CHARLES G. BROCKWAY, PH.D., P.E.

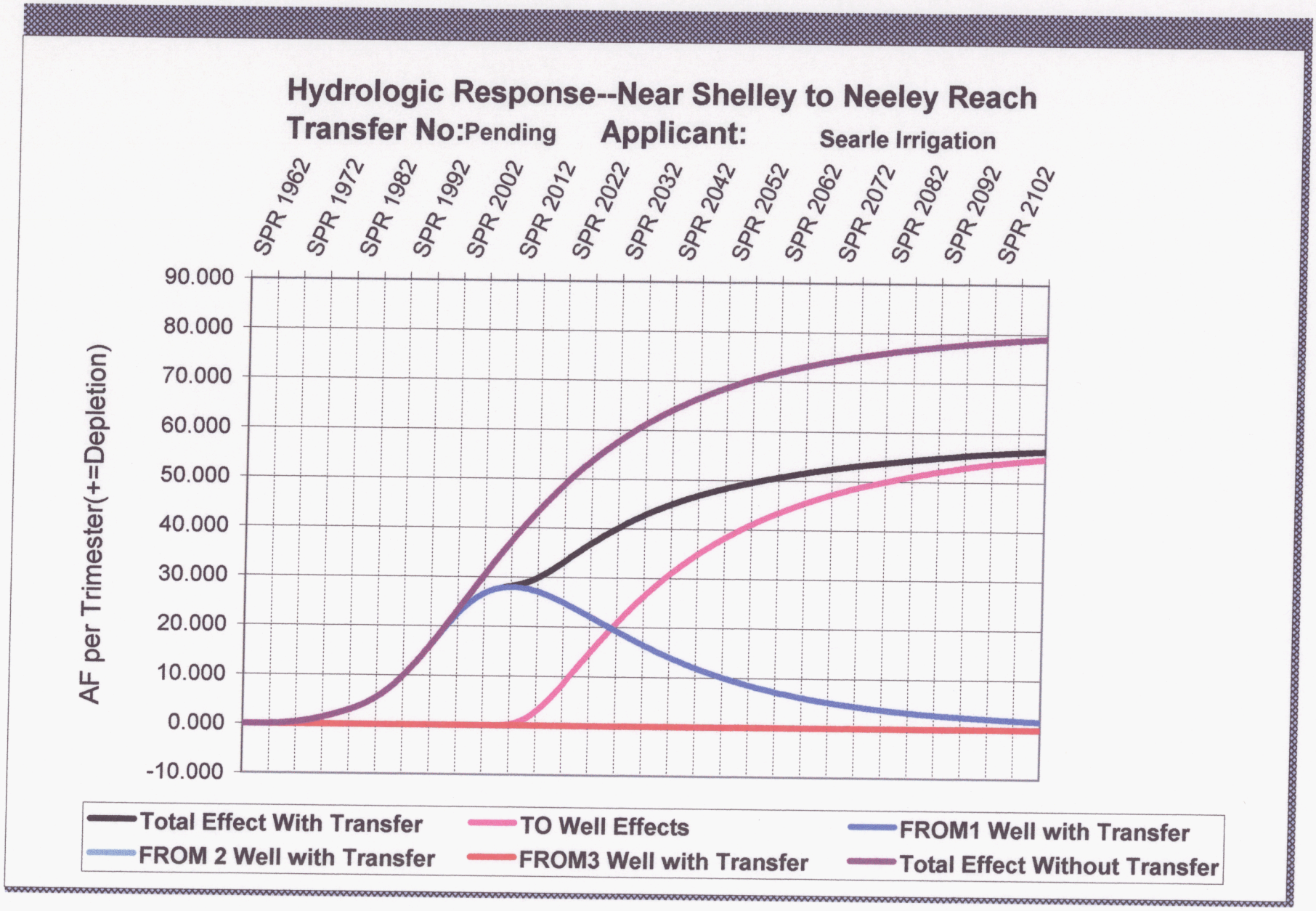
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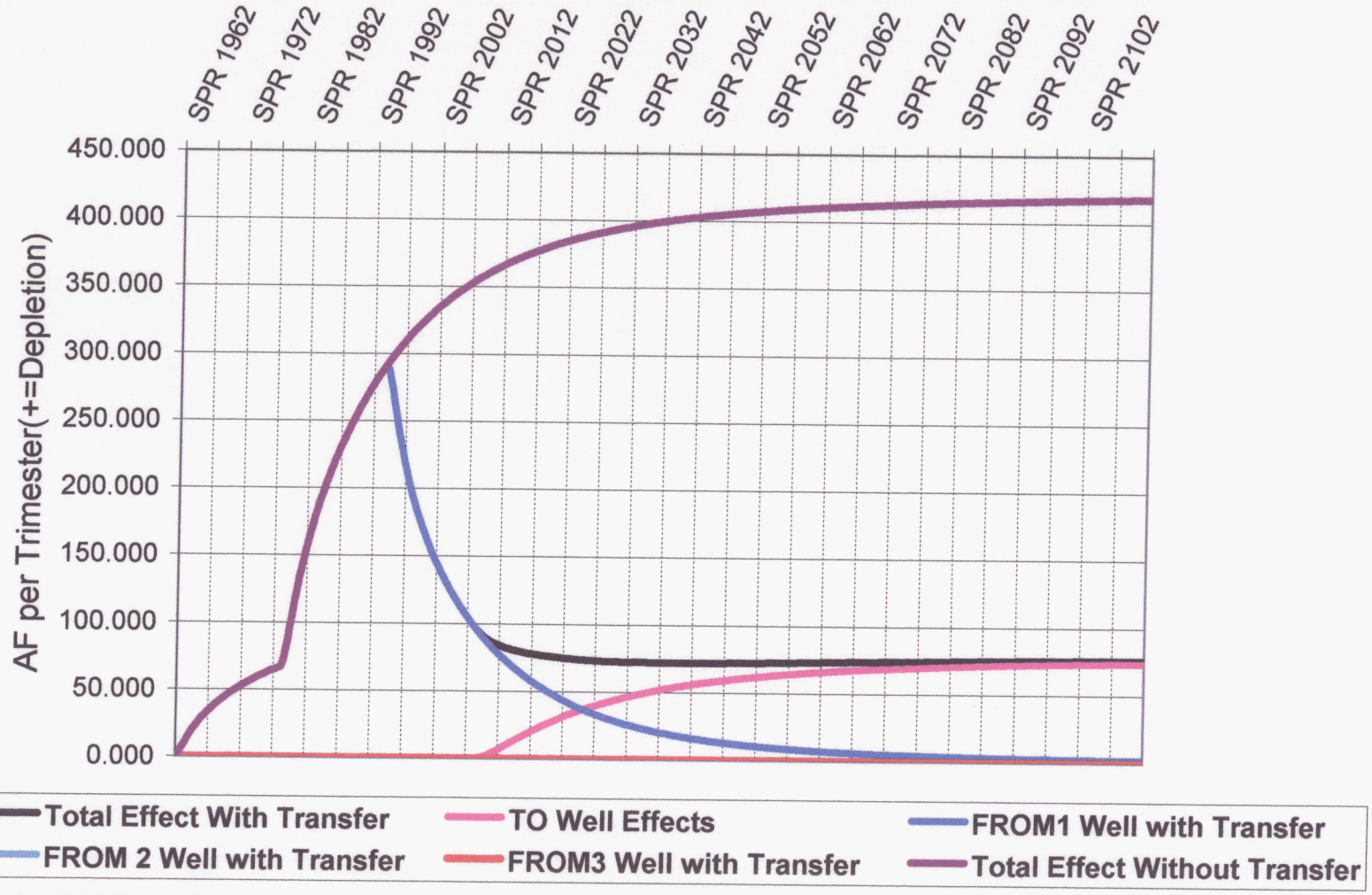
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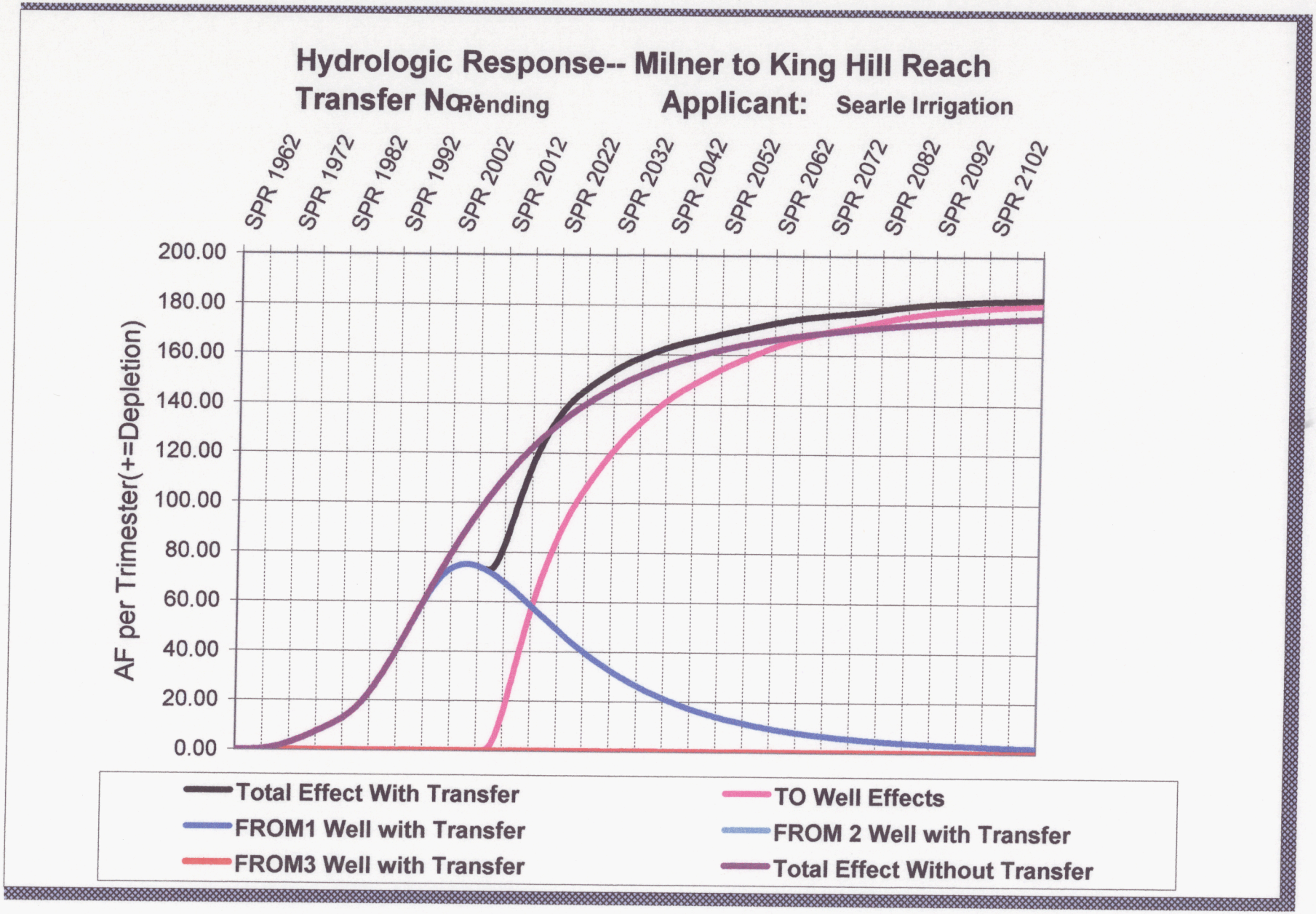

Hydrologic Response--Heise/Ashton to Lewisville
Transfer No: Pending
Applicant: Searle Irrigation
SPR 1962
SPR 1972
SPR 1982
SPR 1992
SPR 2002
SPR 2012
SPR 2022
SPR 2032
SPR 2042
SPR 2052
SPR 2062
SPR 2072
SPR 2082
SPR 2092
SPR 2102
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0.000
-1.000
AF per Trimester(+=Depletion)
Total Effect With Transfer
TO Well Effects
FROM1 Well with Transfer
FROM 2 Well with Transferl
FROM3 Well with Transfer
Total Effect Without Transfer

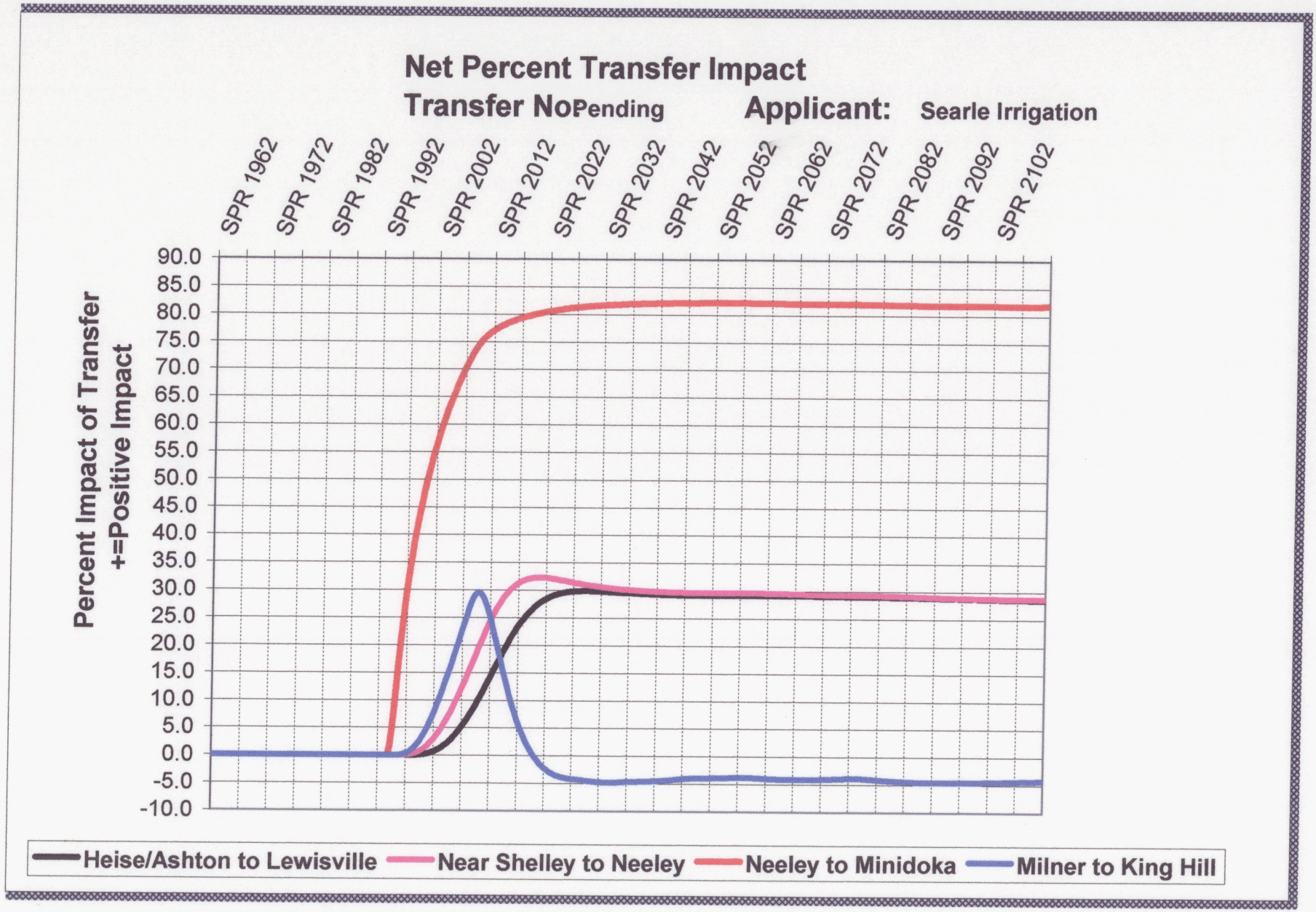

Hydrologic Response--Near Shelley to Neeley Reach
Transfer No:Pending
Applicant:
Searle Irrigation
SPR 1962
SPR 1972
SPR 1982
SPR 1992
SPR 2002
SPR 2012
SPR 2022
SPR 2032
SPR 2042
SPR 2052
SPR 2062
SPR 2072
SPR 2082
SPR 2092
SPR 2102
90.000
80.000
70.000
60.000
50.000
40.000
30.000
20.000
10.000
0.000
-10.000
AF per Trimester(+=Depletion)
Total Effect With Transfer
TO Well Effects
FROM1 Well with Transfer
FROM 2 Well with Transfer
FROM3 Well with Transfer
Total Effect Without Transfer

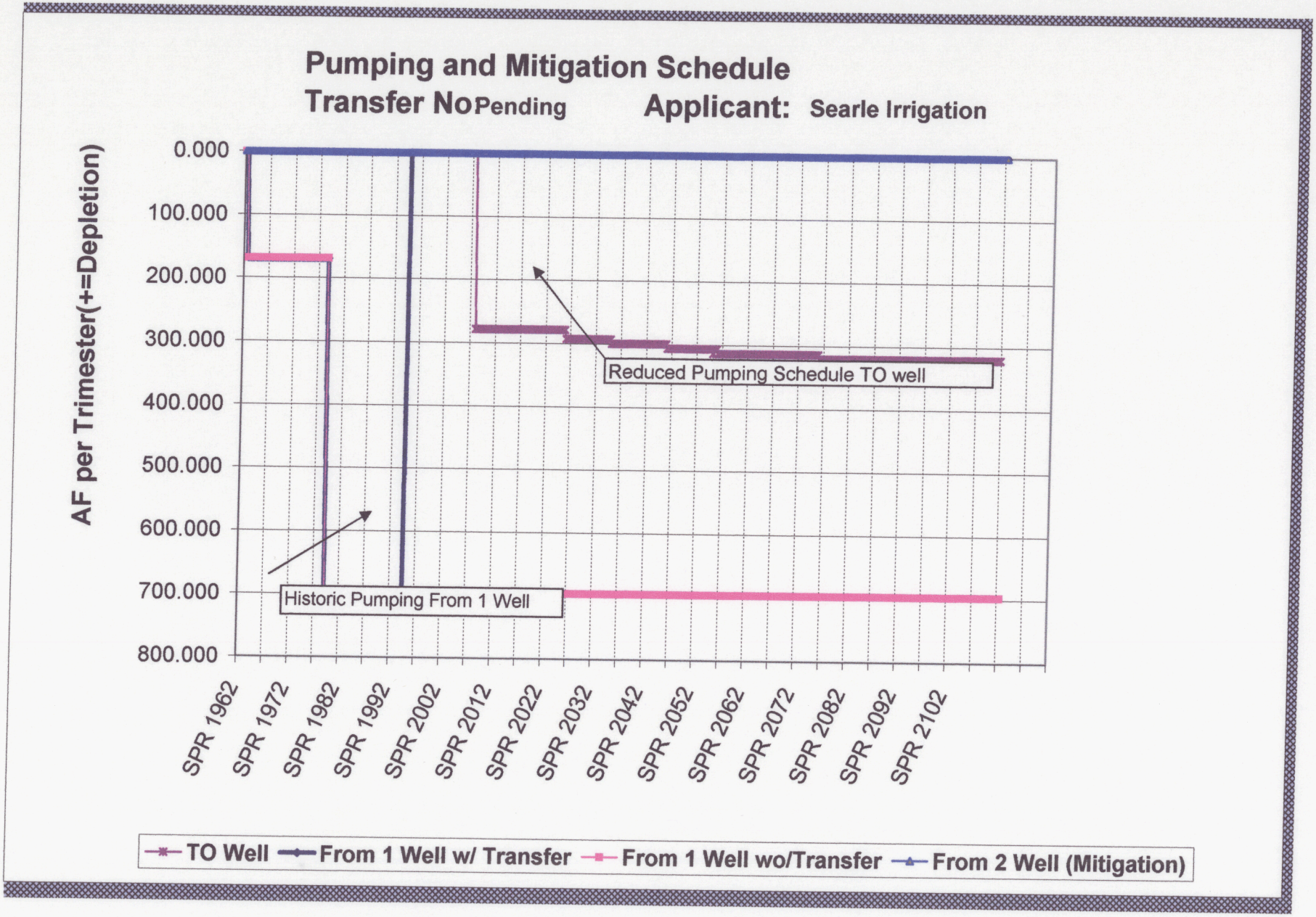
Hydrologic Response--Neeley to Minidoka

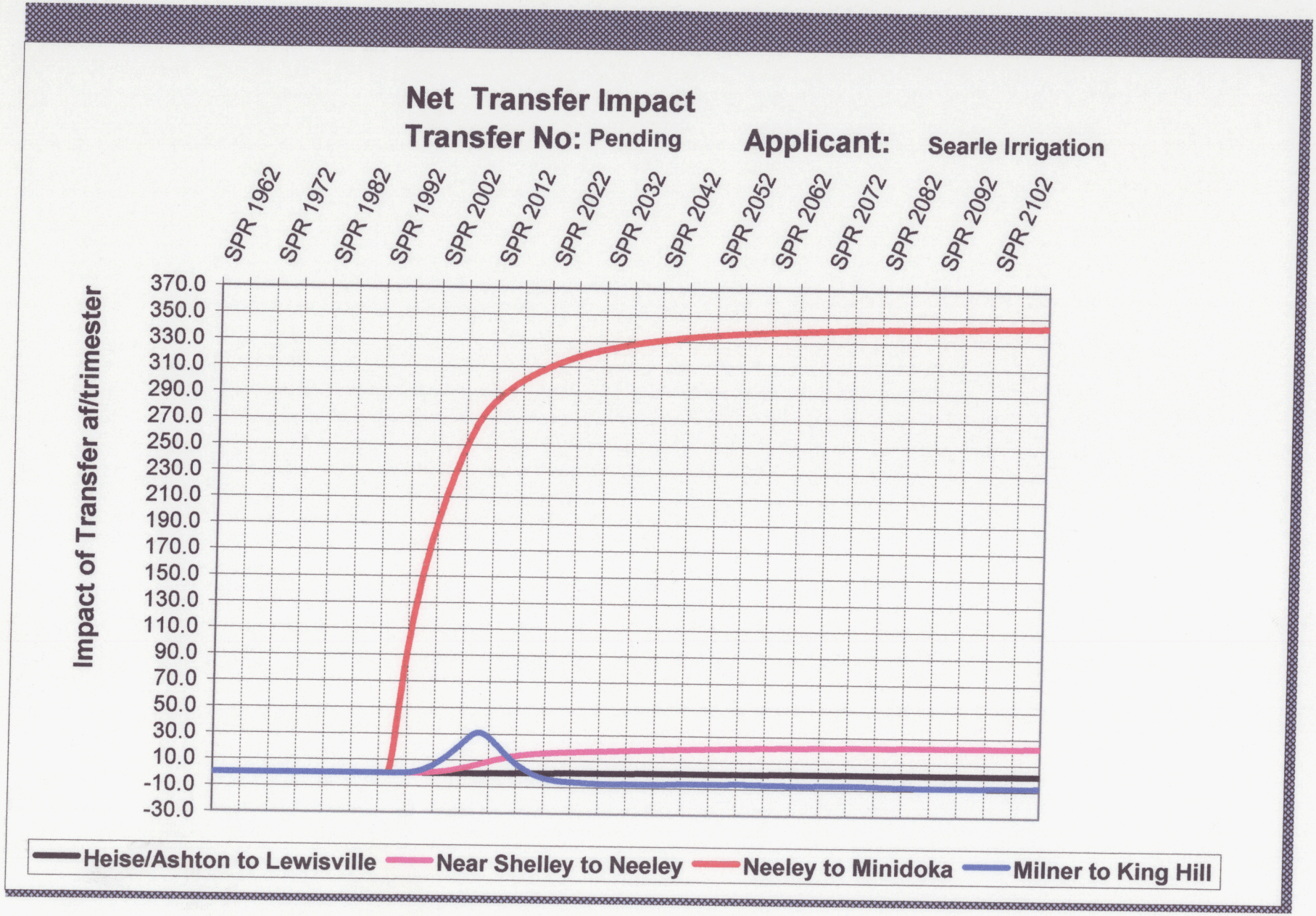
Transfer No: Pending **Applicant:** Searle Irrigation




Hydrologic Response-- Milner to King Hill Reach
Transfer No. Pending
Applicant: Searle Irrigation
SPR 1962
SPR 1972
SPR 1982
SPR 1992
SPR 2002
SPR 2012
SPR 2022
SPR 2032
SPR 2042
SPR 2052
SPR 2062
SPR 2072
SPR 2082
SPR 2092
SPR 2102
AF per Trimester(+=Depletion)
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
Total Effect With Transfer
TO Well Effects
FROM1 Well with Transfer
FROM 2 Well with Transfer
FROM3 Well with Transfer
Total Effect Without Transfer


Net Percent Transfer Impact
Transfer NoPending
Applicant: Searle Irrigation
SPR 1962
SPR 1972
SPR 1982
SPR 1992
SPR 2002
SPR 2012
SPR 2022
SPR 2032
SPR 2042
SPR 2052
SPR 2062
SPR 2072
SPR 2082
SPR 2092
SPR 2102
Percent Impact of Transfer
+=Positive Impact
90.0
85.0
80.0
75.0
70.0
65.0
60.0
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
-5.0
-10.0
Heise/Ashton to Lewisville
Near Shelley to Neeley
Neeley to Minidoka
Milner to King Hill

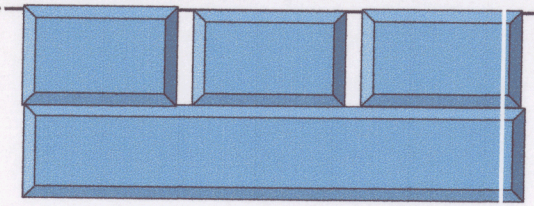

Pumping and Mitigation Schedule
Transfer NoPending
Applicant: Searle Irrigation
AF per Trimester(+=Depletion)
0.000
100.000
200.000
300.000
400.000
500.000
600.000
700.000
800.000
Reduced Pumping Schedule TO well
Historic Pumping From 1 Well
SPR 1962
SPR 1972
SPR 1982
SPR 1992
SPR 2002
SPR 2012
SPR 2022
SPR 2032
SPR 2042
SPR 2052
SPR 2062
SPR 2072
SPR 2082
SPR 2092
SPR 2102
TO Well
From 1 Well w/ Transfer
From 1 Well wo/Transfer
From 2 Well (Mitigation)


Net Transfer Impact
Transfer No: Pending
Applicant: Searle Irrigation
Impact of Transfer af/trimester
SPR 1962
SPR 1972
SPR 1982
SPR 1992
SPR 2002
SPR 2012
SPR 2022
SPR 2032
SPR 2042
SPR 2052
SPR 2062
SPR 2072
SPR 2082
SPR 2092
SPR 2102
370.0
350.0
330.0
310.0
290.0
270.0
250.0
230.0
210.0
190.0
170.0
150.0
130.0
110.0
90.0
70.0
50.0
30.0
10.0
-10.0
-30.0
Heise/Ashton to Lewisville
Near Shelley to Neeley
Neeley to Minidoka
Milner to King Hill

GROUND-WATER RIGHTS TRANSFER SPREADSHEET

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Cells this color are set up for user entries



Pumping at Sagewood w/transfer

ENTER STARTING DATE FOR SIMULATION. THEN PUSH "UPDATE DATES" BUTTON	
YEAR	1962
SEASON	Spring
Transfer # 1:	Pending
	Searle Irrigation
Transfer # 2	None

ENTER CELL LOCATION	Searle Irrig 'TO' CELL	Searle(Rainbow) 'FROM1' CELL	'FROM2' CELL	'FROM3' CELL
ROW	5	6		
COLUMN	24	30		

sum1962 to spr1978 169.40 AF/TRIMESTER
sum1978 to win 1993 696.60 AF/TRIMESTER
191994 to - 0.00 CRP

REDUCED PUMPIN	Searle Irrig		REDUCED	0	
Transferred Vol.	Trans #1	Pending	Transferred V	Trans #2	None
	AF/TRI 696.6			AF/TRI 0	
	AF/YR 2090		%Pumped	AF/YR 0	%Pumped
	2003 to		0.00	2003 to	0
	2004		0.00	2004	0
	2005		0.40	2005	0
	2006		0.40	2006	0
	2007		0.40	2007	0
	2008	2012	0.40	2007 2012	0
	2013	2017	0.40	2013 2017	0
	2018	2022	0.40	2018 2022	0
	2023	2031	0.42	2023 2031	0
	2032	2042	0.43	2032 2042	0
	2043	2052	0.44	2043 2052	0
	2053	2072	0.45	2053 2072	0
	2073 >>>>		0.46	2073 >>>>	0

NOTE: Response time shifted by 3 years to account for travel time from proposed pumping to nearest model node. See shift and zero pumping for 2005 through 2007

TRIMESTER OF ACTIVITY	TO WELL Projected Use AF/TRIMESTER	FROM1 WELL With Transfer AF/TRIMESTER	FROM1 WELL Without Transfer AF/TRIMESTER	FROM2 WELL With Transfer AF/TRIMESTER	FROM2 WELL Without Transfer AF/TRIMESTER	FROM3 WELL With Transfer AF/TRIMESTER	FROM3 WELL Without Transfer AF/TRIMESTER
SPR 1962	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SUM 1962	0.00	169.40	169.40	0.00	0.00	0.00	0.00
WIN 1962	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SPR 1963	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SUM 1963	0.00	169.40	169.40	0.00	0.00	0.00	0.00
WIN 1963	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SPR 1964	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SUM 1964	0.00	169.40	169.40	0.00	0.00	0.00	0.00
WIN 1964	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SPR 1965	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SUM 1965	0.00	169.40	169.40	0.00	0.00	0.00	0.00
WIN 1965	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SPR 1966	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SUM 1966	0.00	169.40	169.40	0.00	0.00	0.00	0.00
WIN 1966	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SPR 1967	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SUM 1967	0.00	169.40	169.40	0.00	0.00	0.00	0.00
WIN 1967	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SPR 1968	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SUM 1968	0.00	169.40	169.40	0.00	0.00	0.00	0.00
WIN 1968	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SPR 1969	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SUM 1969	0.00	169.40	169.40	0.00	0.00	0.00	0.00
WIN 1969	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SPR 1970	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SUM 1970	0.00	169.40	169.40	0.00	0.00	0.00	0.00
WIN 1970	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SPR 1971	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SUM 1971	0.00	169.40	169.40	0.00	0.00	0.00	0.00
WIN 1971	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SPR 1972	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SUM 1972	0.00	169.40	169.40	0.00	0.00	0.00	0.00
WIN 1972	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SPR 1973	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SUM 1973	0.00	169.40	169.40	0.00	0.00	0.00	0.00

WIN 1973	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SPR 1974	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SUM 1974	0.00	169.40	169.40	0.00	0.00	0.00	0.00
WIN 1974	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SPR 1975	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SUM 1975	0.00	169.40	169.40	0.00	0.00	0.00	0.00
WIN 1975	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SPR 1976	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SUM 1976	0.00	169.40	169.40	0.00	0.00	0.00	0.00
WIN 1976	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SPR 1977	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SUM 1977	0.00	169.40	169.40	0.00	0.00	0.00	0.00
WIN 1977	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SPR 1978	0.00	169.40	169.40	0.00	0.00	0.00	0.00
SUM 1978	0.00	696.60	696.60	0.00	0.00	0.00	0.00
WIN 1978	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SPR 1979	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SUM 1979	0.00	696.60	696.60	0.00	0.00	0.00	0.00
WIN 1979	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SPR 1980	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SUM 1980	0.00	696.60	696.60	0.00	0.00	0.00	0.00
WIN 1980	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SPR 1981	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SUM 1981	0.00	696.60	696.60	0.00	0.00	0.00	0.00
WIN 1981	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SPR 1982	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SUM 1982	0.00	696.60	696.60	0.00	0.00	0.00	0.00
WIN 1982	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SPR 1983	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SUM 1983	0.00	696.60	696.60	0.00	0.00	0.00	0.00
WIN 1983	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SPR 1984	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SUM 1984	0.00	696.60	696.60	0.00	0.00	0.00	0.00
WIN 1984	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SPR 1985	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SUM 1985	0.00	696.60	696.60	0.00	0.00	0.00	0.00
WIN 1985	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SPR 1986	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SUM 1986	0.00	696.60	696.60	0.00	0.00	0.00	0.00
WIN 1986	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SPR 1987	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SUM 1987	0.00	696.60	696.60	0.00	0.00	0.00	0.00
WIN 1987	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SPR 1988	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SUM 1988	0.00	696.60	696.60	0.00	0.00	0.00	0.00
WIN 1988	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SPR 1989	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SUM 1989	0.00	696.60	696.60	0.00	0.00	0.00	0.00
WIN 1989	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SPR 1990	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SUM 1990	0.00	696.60	696.60	0.00	0.00	0.00	0.00
WIN 1990	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SPR 1991	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SUM 1991	0.00	696.60	696.60	0.00	0.00	0.00	0.00
WIN 1991	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SPR 1992	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SUM 1992	0.00	696.60	696.60	0.00	0.00	0.00	0.00
WIN 1992	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SPR 1993	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SUM 1993	0.00	696.60	696.60	0.00	0.00	0.00	0.00
WIN 1993	0.00	696.60	696.60	0.00	0.00	0.00	0.00
SPR 1994	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SUM 1994	0.00	0.00	696.60	0.00	0.00	0.00	0.00
WIN 1994	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SPR 1995	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SUM 1995	0.00	0.00	696.60	0.00	0.00	0.00	0.00

WIN 1995	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SPR 1996	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SUM 1996	0.00	0.00	696.60	0.00	0.00	0.00	0.00
WIN 1996	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SPR 1997	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SUM 1997	0.00	0.00	696.60	0.00	0.00	0.00	0.00
WIN 1997	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SPR 1998	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SUM 1998	0.00	0.00	696.60	0.00	0.00	0.00	0.00
WIN 1998	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SPR 1999	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SUM 1999	0.00	0.00	696.60	0.00	0.00	0.00	0.00
WIN 1999	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2000	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2000	0.00	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2000	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2001	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2001	0.00	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2001	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2002	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2002	0.00	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2002	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2003	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2003	0.00	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2003	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2004	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2004	0.00	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2004	0.00	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2005	*0.00*	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2005	*0.00*	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2005	*0.00*	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2006	*0.00*	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2006	*0.00*	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2006	*0.00*	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2007	*0.00*	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2007	*0.00*	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2007	*0.00*	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2008	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2008	278.63	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2008	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2009	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2009	278.63	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2009	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2010	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2010	278.63	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2010	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2011	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2011	278.63	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2011	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2012	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2012	278.63	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2012	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2013	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2013	278.63	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2013	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2014	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2014	278.63	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2014	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2015	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2015	278.63	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2015	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2016	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2016	278.63	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2016	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2017	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2017	278.63	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2017	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2018	278.63	0.00	696.60	0.00	0.00	0.00	0.00

SUM 2018	278.63	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2018	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2019	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2019	278.63	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2019	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2020	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2020	278.63	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2020	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2021	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2021	278.63	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2021	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2022	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2022	278.63	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2022	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2023	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2023	278.63	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2023	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2024	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2024	278.63	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2024	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2025	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2025	278.63	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2025	278.63	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2026	292.56	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2026	292.56	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2026	292.56	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2027	292.56	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2027	292.56	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2027	292.56	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2028	292.56	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2028	292.56	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2028	292.56	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2029	292.56	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2029	292.56	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2029	292.56	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2030	292.56	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2030	292.56	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2030	292.56	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2031	292.56	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2031	292.56	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2031	292.56	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2032	292.56	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2032	292.56	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2032	292.56	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2033	292.56	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2033	292.56	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2033	292.56	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2034	292.56	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2034	292.56	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2034	292.56	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2035	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2035	299.53	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2035	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2036	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2036	299.53	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2036	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2037	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2037	299.53	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2037	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2038	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2038	299.53	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2038	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2039	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2039	299.53	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2039	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2040	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2040	299.53	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2040	299.53	0.00	696.60	0.00	0.00	0.00	0.00

SPR 2041	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2041	299.53	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2041	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2042	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2042	299.53	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2042	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2043	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2043	299.53	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2043	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2044	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2044	299.53	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2044	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2045	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2045	299.53	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2045	299.53	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2046	306.49	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2046	306.49	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2046	306.49	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2047	306.49	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2047	306.49	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2047	306.49	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2048	306.49	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2048	306.49	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2048	306.49	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2049	306.49	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2049	306.49	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2049	306.49	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2050	306.49	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2050	306.49	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2050	306.49	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2051	306.49	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2051	306.49	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2051	306.49	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2052	306.49	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2052	306.49	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2052	306.49	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2053	306.49	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2053	306.49	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2053	306.49	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2054	306.49	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2054	306.49	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2054	306.49	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2055	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2055	306.49	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2055	306.49	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2056	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2056	313.46	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2056	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2057	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2057	313.46	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2057	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2058	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2058	313.46	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2058	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2059	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2059	313.46	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2059	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2060	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2060	313.46	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2060	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2061	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2061	313.46	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2061	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2062	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2062	313.46	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2062	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2063	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2063	313.46	0.00	696.60	0.00	0.00	0.00	0.00

WIN 2063	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2064	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2064	313.46	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2064	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2065	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2065	313.46	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2065	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2066	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2066	313.46	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2066	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2067	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2067	313.46	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2067	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2068	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2068	313.46	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2068	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2069	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2069	313.46	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2069	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2070	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2070	313.46	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2070	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2071	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2071	313.46	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2071	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2072	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2072	313.46	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2072	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2073	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2073	313.46	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2073	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2074	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2074	313.46	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2074	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2075	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2075	313.46	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2075	313.46	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2076	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2076	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2076	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2077	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2077	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2077	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2078	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2078	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2078	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2079	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2079	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2079	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2080	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2080	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2080	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2081	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2081	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2081	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2082	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2082	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2082	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2083	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2083	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2083	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2084	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2084	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2084	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2085	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2085	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2085	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2086	320.42	0.00	696.60	0.00	0.00	0.00	0.00

SUM 2086	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2086	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2087	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2087	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2087	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2088	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2088	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2088	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2089	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2089	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2089	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2090	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2090	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2090	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2091	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2091	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2091	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2092	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2092	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2092	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2093	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2093	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2093	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2094	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2094	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2094	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2095	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2095	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2095	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2096	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2096	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2096	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2097	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2097	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2097	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2098	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2098	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2098	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2099	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2099	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2099	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2100	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2100	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2100	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2101	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2101	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2101	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2102	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2102	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2102	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2103	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2103	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2103	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2104	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2104	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2104	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2105	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2105	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2105	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2106	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2106	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2106	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2107	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2107	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2107	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2108	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2108	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2108	320.42	0.00	696.60	0.00	0.00	0.00	0.00

SPR 2109	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2109	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2109	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2110	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2110	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2110	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SPR 2111	320.42	0.00	696.60	0.00	0.00	0.00	0.00
SUM 2111	320.42	0.00	696.60	0.00	0.00	0.00	0.00
WIN 2111	320.42	0.00	696.60	0.00	0.00	0.00	0.00

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DEPARTMENT OF WATER RESOURCES

January 27, 2003

Mr. Jeff Peppersack
Idaho Department of Water Resources
1301 N. Orchard St
Boise, Idaho 83706

RE: Ward Dairy Transfer 69768 – Revised Consumptive Use Calculations

Dear Mr. Peppersack

In a letter dated January 21, 2003, you requested that the Allen and Brockway (1983) average irrigation requirements should be used for consumptive use values. The following calculations use the Allen and Brockway irrigation requirement values in calculating the consumptive use specific to the Ward Transfer #69768.

These revised consumptive use values result in a change in the number of acres to be retired at both the From Well and the mitigation lands as specified in the revised mitigation plan submitted to the Department on January 10, 2003. The conclusions stated here are intended to supercede those in the mitigation plan as well as a letter to IDWR dated January 7, 2003, in which consumptive use was calculated using the AGRIMET data.

From Well

The transfer specifies 390 afa to be transferred to the Ward Dairy. Using the Allen and Brockway irrigation requirements table for Malta, Idaho, the CU/acre is calculated to be 2.37 ac-ft per acre for 1999. This calculation is detailed in Table 1 supported by the 1999 Farm Service Agency crop report attached.

At this consumptive rate, 165 acres will be retired at the From-Well. The diversion volume for 165 acres of irrigation ground is 660 afa. The transfer specifies 130 acres will be retired. By this letter, the applicant wishes to increase the amount of acres to be retired to 165. Of these additional 35 acres,

- 5 will come from the SW NW Section 4 T13S R27E,
- 4 from the NW SE Section 5 T13S R27E,
- 11 from the NE SE Section 5 T13S R27E, and
- 15 from the SW SE Section 5 T13S R27E.

Mitigation Land

In the revised mitigation plan, the applicant offered to retire 234 acres of irrigation ground (based on a consumptive rate of 2.76 ac-ft/ac). Based on the Allen and

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Brockway irrigation requirements at Rupert, Idaho, which is the closest station, the 1994 consumptive use is calculated to be 2.97 ac-ft/ac. Using this value, a mitigation volume of 645 afa is met by retiring 217 acres.

Similarly, for the 8-year period of offering an additional 645 afa, requires 217 acres of irrigation lands to be temporarily dried up.

The calculations are shown in Table 2. The supporting FSA crop report and field map are attached.

This change in the number of acres to be retired does not change the mitigation plan because the mitigation plan used volume in all calculations. Also, the applicant retains the right to apply for any positive impacts that this transfer and mitigation plan may have on other river reaches in the ESPA. The positive impacts of this transfer and mitigation plan on the ESPA are not identified or quantified at this time. Once IDWR recognizes such positive impacts or "reach credits", estimates will be made at that time.

Also, I attached a closing statement as ownership information that includes a legal description of the mitigation lands.

If you have any questions, please call Steven Hannula at ERO Resources Corporation, 373-7983.

Regards,

Steven R. Hannula

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