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MEMORANDUM

DATE: April 15, 2013
TO: John Marshall
FROM: Scott King, P.E. *SK*
RE: ESPAM Analysis of Double C Transfer

JOB NO.: 905.0040

This memorandum provides results of Eastern Snake Plain Aquifer Model (ESPAM) analysis of a water right transfer proposed by Double C Farms near Oakley, Idaho. This transfer proposes moving portions of five water rights diverted from five points of diversion (wells) approximately 2 to 7 miles south to 16 existing points of diversion (wells). The "From" wells are located in four ESPAM model grids. The "To" wells are located in ten ESPAM model grids, three of which are inactive grid cells which cannot be analyzed with the current ESPAM v3.1 model.

Table 1 presents the five water rights proposed for transfer listing the existing Pre-Transfer conditions, quantities proposed for transfer, and remaining untransferred portions. Combined, the transfer proposes changing the points of diversion and place of use for 3.08 cfs, 747 acre-feet, and 189 acres.

Water right 45-2382 is diverted from three points of diversion. The ESPAM analysis assumes that the quantities transferred are diverted equally from all three points. One well is located in cell Row 92 Column 46 and two wells are located in Row 91 Column 47. These two cells are used for every model run. Similarly, water rights 45-2600A, 45-13469, 45-2600B and 45-13470 are diverted from two points of diversion and it is assumed that the quantities transferred are diverted equally from both points. These wells are located in Row 92 Column 43 and Row 91 Column 43. One set of model simulations are performed with 100% of the volume from these rights diverted from Row 92, Column 43, and a second set with 100% of the volume from Row 91, Column 43.

Table 2 presents the locations of the five points of diversion for the affected rights, the associated ESPAM grid cells, the transferred acres, and the transferred consumptive volume associated with the transferred acres. This analysis uses IDWR's standard annual consumptive volume of 3.0 acre-feet per acre.

It is expected that the quantities transferred will be diverted approximately proportionally from the sixteen points of diversion receiving the transferred rights. For purposes of this analysis, the ESPAM simulation was initially performed assuming that 100 percent of the transferred volume was diverted from one model grid as an extremely conservative approach. Simulations were performed using this approach for each of the seven active model grids for which points of diversion are located. A

total of fourteen model simulations were performed. Under every scenario, mitigation is not required as the change ratio is always less than 10% and the maximum net depletion is always less than 2 acre-feet per trimester.

ETRAN spreadsheet naming conventions are as follows.

ETRAN_3.1 run1a 94.41.xlsm: Run "1a" denotes simulations with "FROM3 CELL" in Row 92, Column 43. Run "1b" denotes simulations with "FROM3 CELL" in Row 91, Column 43. "94.41" denotes the "TO CELL" receiving 100% of the simulated volume with.

Transfer summaries are attached for each model run. A summary of maximum increased depletion to reach (Test 1), maximum net depletion (Test 2), and maximum total depletion to reach (Test 3) is included in Table 3.

This analysis demonstrates that the proposed transfer will not adversely impact spring discharges beyond the limits set forth by IDWR. Mitigation is not required.

Table 1: Transferred Water Rights.

PRE-TRANSFER						Combined Use Limits				
Water Right	cfs	af	acres	cfs/acr	af/acr	cfs	af	acres	cfs/acre	af/acre
45-2382	10.3	2560	640	0.016	4.0					
45-2600A	5.12	1232	308	0.017	4.0	5.12	1232	318	0.016	3.87
45-13469	0.16	0	10	0.016	0.0					
45-2600B	2.99	720	180	0.017	4.0	2.99	720	186	0.016	3.87
45-13470	0.1	0	6	0.017	0.0					
Totals	18.67	4512	1144							

TRANSFERRED PORTIONS						Combined Use Limits				
Water Right	cfs	af	acres	cfs/acr	af/acr	cfs	af	acres	cfs/acre	af/acre
45-2382	1.87	464	116	0.016	4					
45-2600A	0.725	174	43.6	0.017	4	0.725	174	45	0.016	3.87
45-13469	0.023	0	1.4	0.016	0					
45-2600B	0.450	108	27.1	0.017	4	0.450	108	28	0.016	3.87
45-13470	0.015	0	0.9	0.017	0					
Totals	3.08	747	189							

REMAINING (UNTRANSFERRED) PORTIONS						Combined Use Limits				
Water Right	cfs	af	acres	cfs/acr	af/acr	cfs	af	acres	cfs/acre	af/acre
45-2382	8.43	2096	524	0.016	4					
45-2600A	4.40	1058	264.4	0.017	4	4.395	1058	273	0.016	3.87
45-13469	0.14	0	8.6	0.016	0					
45-2600B	2.54	612	152.9	0.017	4	2.540	612	158	0.016	3.87
45-13470	0.08	0	5.1	0.017	0					
Totals	15.59	3765	955							

Table 2: "From" Points of Diversion, Acres, and Consumptive Use Calculations.

Water Right 45-2382						
Points of Diversion	Grid Row	Grid Column	Transferred Acres	Annual Consumptive Volume (af/acre)	Transferred Consumptive Volume (af/yr)	Transferred Consumptive Volume (af/trimester)
11S 23E 33 SWNE	91	47	38.7	3	116	38.7
11S 23E 33 SWNW	91	47	38.7	3	116	38.7
11S 23E 33 SWSW	92	46	38.7	3	116	38.7
Total			116	3	348	116.0
Water Right 45-2600A, 45-13469, 45-2600B, 45-13470						
Points of Diversion	Grid Row	Grid Column	Transferred Acres	Annual Consumptive Volume (af/acre)	Transferred Consumptive Volume (af/yr)	Transferred Consumptive Volume (af/trimester)
12S 22E 11 SWNE	91	43	36.5	3	109.5	36.5
12S 22E 12 SWNW	92	43	36.5	3	109.5	36.5
Total			73	3	219	73.0
Total Transferred			189		567	189

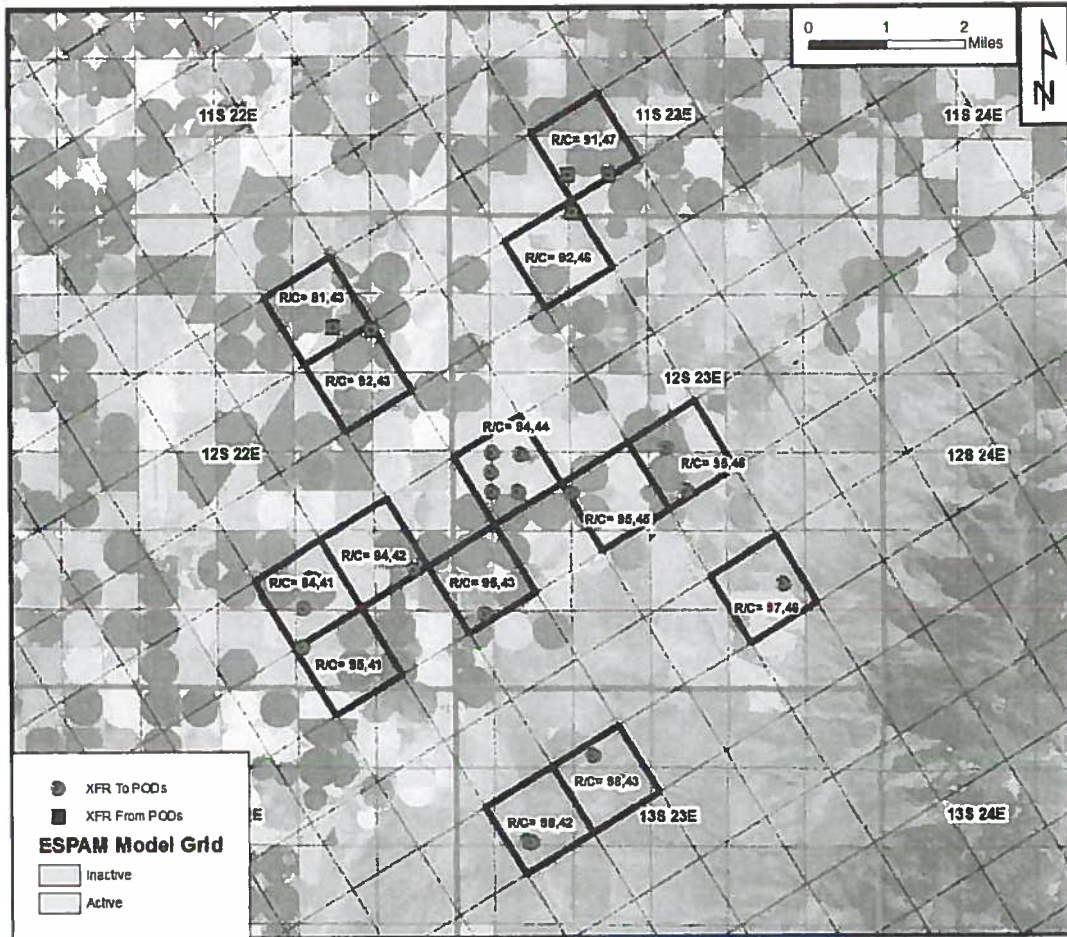


Figure 1: Model grid and points of diversion.

Table 3: Analysis results summary.

Simulation	Test 1		Test 2		Test 3		Mitigation Required?
	Maximum Increased Depletion to Reach (%)	Reach	Maximum Net Depletion (af/trimester)	Reach	Maximum Total Depletion to Reach (%)	Reach	
ETRAN_3.1 run1a 94.41	1.8%	Dev. Wbl. to Buhl	0.7	Dev. Wbl. to Buhl	32.9%	Nr Bickft to Neeley	No
ETRAN_3.1 run1b 94.41	1.6%	Dev. Wbl. to Buhl	0.6	Dev. Wbl. to Buhl	32.9%	Nr Bickft to Neeley	No
ETRAN_3.1 run1a 94.42	1.6%	Dev. Wbl. to Buhl	0.7	Dev. Wbl. to Buhl	32.9%	Nr Bickft to Neeley	No
ETRAN_3.1 run1b 94.42	1.4%	Dev. Wbl. to Buhl	0.6	Dev. Wbl. to Buhl	32.9%	Nr Bickft to Neeley	No
ETRAN_3.1 run1a 94.44	1.1%	Dev. Wbl. to Buhl	0.4	Dev. Wbl. to Buhl	33.1%	Nr Bickft to Neeley	No
ETRAN_3.1 run1b 94.44	0.9%	Dev. Wbl. to Buhl	0.3	Dev. Wbl. to Buhl	33.1%	Nr Bickft to Neeley	No
ETRAN_3.1 run1a 95.41	1.7%	Dev. Wbl. to Buhl	0.7	Dev. Wbl. to Buhl	32.9%	Nr Bickft to Neeley	No
ETRAN_3.1 run1b 95.41	1.5%	Dev. Wbl. to Buhl	0.6	Dev. Wbl. to Buhl	32.9%	Nr Bickft to Neeley	No
ETRAN_3.1 run1a 95.43	1.5%	Dev. Wbl. to Buhl	0.6	Dev. Wbl. to Buhl	33.0%	Nr Bickft to Neeley	No
ETRAN_3.1 run1b 95.43	1.3%	Dev. Wbl. to Buhl	0.5	Dev. Wbl. to Buhl	33.0%	Nr Bickft to Neeley	No
ETRAN_3.1 run1a 95.45	0.6%	Dev. Wbl. to Buhl	0.3	Dev. Wbl. to Buhl	33.1%	Nr Bickft to Neeley	No
ETRAN_3.1 run1b 95.45	0.4%	Dev. Wbl. to Buhl	0.2	Dev. Wbl. to Buhl	33.1%	Nr Bickft to Neeley	No
ETRAN_3.1 run1a 95.46	0.1%	Neeley to Minidoka	0.0	Nr. Bickft to Neeley	33.2%	Nr Bickft to Neeley	No
ETRAN_3.1 run1b 95.46	0.9%	Neeley to Minidoka	0.5	Nr. Bickft to Neeley	33.2%	Nr Bickft to Neeley	No

ESPA Ground Water Rights Transfer Spreadsheet Data Summary

TRANSFER NO: 0
TRANSFER NAME: Double C Farms

PREPARED BY: Scott King, P.E. SPF Water Engineering, LLC
DATE: 10-Apr-13
Transfer Tool Version: Version 3.1

BLUE CELLS ARE SET UP FOR USER ENTRIES

WATER RIGHTS INVOLVED:

Group 1 Transfer Rights		Group 2 Additional Mitigation Rights	
Right No.	Priority Date	Right No.	Priority Date
45-2382	8/14/1951	none	
45-2600A	1/21/1960		
45-13469	8/30/1965		
45-2600B	1/21/1960		
45-13470	8/30/1965		

HISTORIC BENEFICIAL USE:

Trans/Mit Rights (group no.)	Acres to Dry Up (ac)	Beneficial Use (af/yr)	Total (af/yr)
45-2382	116	3	348
45-2600A	43.8	3	130.8
45-13469	1.4	9	4.2
45-2600B	27.1	1	81.3
45-13470	9.9	3	2.7
	189		567 total per year 189 per trimester

MITIGATION NOTES:

None

MODEL CELL LOCATIONS:

	TO WELL	FROM1 WELL	FROM2 WELL	FROM3 WELL
ROW	95	91	92	92
COLUMN	43	47	46	43

	Start Date		End Date		Water Use		Acres Authorized (acres)	Notes
	Season	Year	Season	Year	Annual (af/yr)	Trimester (af/trimester)		
TO Well (Projected Use)	Spring	2013	Winter	2162	567.0	189.0	189.0	100% of water transferred to wells in cell R95 C43
FROM1 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	2/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 2 of 3 wells under this right located in cell R91 C47
FROM1 Well (Without Transfer)	Spring	2113	Winter	2162	232	77.3	77.3	Irrigation of 2/3 of 116 acres will continue.
FROM2 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	1/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 1 of 3 wells under this right located in cell R92 C45
FROM2 Well (Without Transfer)	Spring	2013	Winter	2162	116	38.7	38.7	Irrigation of 1/3 of 116 acres will continue.
FROM3 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	73 acres transferred from 45-2600A, 45-2600B, 45-13469, and 45-13470 will no longer be irrigated from the wells under this right. Wells are located in cells R91, C43 and R92, C43. Cell R92 C43 alone was selected for model simulation. Results are similar if Cell R91 C43 is used instead.
FROM3 Well (Without Transfer)	Spring	2013	Winter	2162	219	73.0	73.0	Irrigation of 73 acres will continue.

ESPA Ground Water Rights Transfer Spreadsheet Data Summary

TRANSFER NO: 0
TRANSFER NAME: Double C Farms

PREPARED BY: Scott King, P.E., SPFF Water Engineering, LLC
DATE: 10-Apr-13
Transfer Tool Version: Version 3.1

BLUE CELLS ARE SET UP FOR
USER ENTRIES

WATER RIGHTS INVOLVED:

Group 1 Transfer Rights		Group 2 Additional Mitigation Rights	
Right No.	Priority Date	Right No.	Priority Date
45-2382	6/14/1951	none	
45-2600A	1/21/1960		
45-13469	6/30/1985		
45-2600B	1/21/1960		
45-13470	8/30/1985		

HISTORIC BENEFICIAL USE:

Trans/Mit. Rights (group no.)	Acres to Dry Up (ac)	Beneficial Use (af/yr)	Total (af/yr)
45-2382	116	9	348
45-2600A	43.8	3	130.8
45-13469	1.4	3	4.2
45-2600B	27.1	3	81.3
45-13470	0.0	3	2.7
	189		567 total per year 189 per trimester

MITIGATION NOTES:

None

MODEL CELL LOCATIONS:

	TO WELL	FROM1 WELL	FROM2 WELL	FROM3 WELL
ROW	95	91	92	92
COLUMN	46	47	48	43

	Start Date		End Date		Water Use		Acres Authorized (acres)	Notes
	Season	Year	Season	Year	Annual (af/yr)	Trimester (af/trimester)		
TO Well (Projected Use)	Spring	2013	Winter	2162	567.0	189.0	189.0	100% of water transferred to wells in cell R95 C46
FROM1 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	2/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 2 of 3 wells under this right located in cell R91, C47
FROM1 Well (Without Transfer)	Spring	2013	Winter	2162	232	77.3	77.3	Irrigation of 2/3 of 116 acres will continue
FROM2 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	1/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 1 of 3 wells under this right located in cell R92, C46
FROM2 Well (Without Transfer)	Spring	2013	Winter	2162	116	38.7	38.7	Irrigation of 1/3 of 116 acres will continue
FROM3 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	73 acres transferred from 45-2600A, 45-2600B, 45-13469, and 45-13470 will no longer be irrigated from the wells under this right. Wells are located in cells R91, C43 and R92, C43. Cell R92 C43 alone was selected for model simulation. Results are similar if Cell R91, C43 is used instead
FROM3 Well (Without Transfer)	Spring	2013	Winter	2162	219	73.0	73.0	Irrigation of 73 acres will continue

ESPA Ground Water Rights Transfer Spreadsheet Data Summary

TRANSFER NO: 0
TRANSFER NAME: Double C Farms

PREPARED BY: Scott King, P.E. SPW Water Engineering, LLC
DATE: 10-Apr-13
Transfer Tool Version: Version 3.1

BLUE CELLS ARE SET UP FOR USER ENTRIES

WATER RIGHTS INVOLVED:

Group 1 Transfer Rights		Group 2 Additional Mitigation Rights	
Right No.	Priority Date	Right No.	Priority Date
45-2382	6/14/1961	none	
45-2600A	1/21/1960		
45-13469	6/30/1965		
45-2600B	1/21/1960		
45-13470	6/30/1965		

HISTORIC BENEFICIAL USE:

Trans/Mit Rights (group no.)	Acres to Dry Up (ac)	Beneficial Use (afa/yr)	Total (afa/yr)
45-2382	116	3	348
45-2600A	43.6	3	130.8
45-13469	1.4	3	4.2
45-2600B	27.1	3	81.3
45-13470	0.0	3	2.7
	189		587 total per year 189 per trimester

MITIGATION NOTES:

MODEL CELL LOCATIONS:

	TO WELL	FROM1 WELL	FROM2 WELL	FROM3 WELL
ROW	84	91	92	92
COLUMN	42	47	46	43

	Start Date		End Date		Water Use		Acres Authorized (acres)	Notes
	Season	Year	Season	Year	Annual (afa/yr)	Trimester (afa/trimester)		
TO Well (Projected Use)	Spring	2013	Winter	2162	587.0	189.0	189.0	100% of water transferred to wells in cell R94 C42
FROM1 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	2/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 2 or 3 wells under this right located in cell R91 C47
FROM1 Well (Without Transfer)	Spring	2013	Winter	2162	282	7.3	77.3	Irrigation of 2/3 of 116 acres will continue
FROM2 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	1/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 1 or 3 wells under this right located in cell R92 C46
FROM2 Well (Without Transfer)	Spring	2013	Winter	2162	116	38.7	38.7	Irrigation of 1/3 of 116 acres will continue
FROM3 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	73 acres transferred from 45-2600A, 45-2600B, 45-13469 and 45-13470 will no longer be irrigated from the wells under this right. Wells are located in cells R91 C43 and R92 C43. Cell R92 C43 alone was selected for model simulation. Results are similar if Cell R51 C43 is used instead.
FROM3 Well (Without Transfer)	Spring	2013	Winter	2162	219	73.0	73.0	Irrigation of 73 acres will continue

ESPA Ground Water Rights Transfer Spreadsheet Data Summary

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PREPARED BY: Scott King, P.E., SPF Water Engineering, LLC
DATE: 10-Apr-13
Transfer Tool Version: Version 3.1

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WATER RIGHTS INVOLVED:

Group 1 Transfer Rights		Group 2 Additional Mitigation Rights	
Right No.	Priority Date	Right No.	Priority Date
45-2382	8/14/1961	none	
45-2600A	1/21/1960		
45-1346B	6/30/1961		
45-2600B	1/21/1960		
45-1347D	6/30/1965		

HISTORIC BENEFICIAL USE:

Trans/Mit Rights (group no.)	Acres to Dry Up (ac)	Beneficial Use (af/yr)	Total (af/yr)
45-2382	116	3	348
45-2600A	43.6	3	130.8
45-1346B	1.4	3	4.2
45-2600B	27.1	3	81.3
45-1347D	0.9	3	2.7
	189		567 total per year 189 per trimester

MITIGATION NOTES:

None

MODEL CELL LOCATIONS:

	TO WELL	FROM1 WELL	FROM2 WELL	FROM3 WELL
ROW	94	91	92	92
COLUMN	41	47	48	43

	Start Date		End Date		Water Use		Acres Authorized (acres)	Notes
	Season	Year	Season	Year	Annual (af/yr)	Trimester (af/trimester)		
TO Well (Projected Use)	Spring	2013	Winter	2162	567.0	189.0	189.0	100% of water transferred to wells in cell R94 C41.
FROM1 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	2/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 2 of 3 wells under this right located in cell R91 C47
FROM1 Well (Without Transfer)	Spring	2013	Winter	2162	232	77.3	77.3	Irrigation of 2/3 of 116 acres will continue
FROM2 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	1/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 1 of 3 wells under this right located in cell R92 C48
FROM2 Well (Without Transfer)	Spring	2013	Winter	2162	116	38.7	38.7	Irrigation of 1/3 of 116 acres will continue
FROM3 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	73 acres transferred from 45-2600A, 45-2600B, 45-1346B, and 45-1347D will no longer be irrigated from the wells under this right. Wells are located in cells R91, C43 and R92, C42. Cell R92 C43 alone was selected for model simulation. Results are similar if Cell R91, C43 is used instead.
FROM3 Well (Without Transfer)	Spring	2013	Winter	2162	219	73.0	73.0	Irrigation of 75 acres will continue.

ESPA Ground Water Rights Transfer Spreadsheet Data Summary

TRANSFER NO: 0
TRANSFER NAME: Double C Farms

PREPARED BY: Scott King, P.E., SPF Water Engineering, LLC
DATE: 10-Apr-13
Transfer Tool Version: Version 3.1

BLUE CELLS ARE SET UP FOR USER ENTRIES

WATER RIGHTS INVOLVED:

Group 1 Transfer Rights		Group 2 Additional Mitigation Rights	
Right No.	Priority Date	Right No.	Priority Date
45-2382	8/14/1951	none	
45-2600A	1/21/1960		
45-13469	6/30/1965		
45-2600B	1/21/1960		
45-13470	6/30/1965		

HISTORIC BENEFICIAL USE:

Trans/Mit Rights (group no.)	Acres to Dry Up (ac)	Beneficial Use (af/yr)	Total (af/yr)
45-2382	116	3	348
45-2600A	43.6	3	130.8
45-13469	1.4	3	4.2
45-2600B	27.1	3	81.3
45-13470	0.9	3	2.7
	189		567 total per year 189 per trimester

MITIGATION NOTES:

None

MODEL CELL LOCATIONS:

	TO WELL	FROM1 WELL	FROM2 WELL	FROM3 WELL
ROW	85	91	92	92
COLUMN	41	47	48	43

	Start Date		End Date		Water Use		Acres Authorized (acres)	Notes
	Season	Year	Season	Year	Annual (af/yr)	Trimester (af/trimester)		
TO Well (Projected Use)	Spring	2013	Winter	2162	567.0	189.0	189.0	100% of water transferred to wells in cell R95 C41
FROM1 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	2/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 2 of 3 wells under this right located in cell R91, C47
FROM1 Well (Without Transfer)	Spring	2013	Winter	2162	232	77.3	77.3	Irrigation of 2/3 of 116 acres will continue
FROM2 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	1/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 1 of 3 wells under this right located in cell R92, C46
FROM2 Well (Without Transfer)	Spring	2013	Winter	2162	116	38.7	38.7	Irrigation of 1/3 of 116 acres will continue
FROM3 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	73 acres transferred from 45-2600A, 45-2600B, 45-13469, and 45-13470 will no longer be irrigated from the wells under this right. Wells are located in cells R91, C43 and R92, C43. Cell R92 C43 alone was selected for model simulation. Results are similar if Cell R91, C43 is used instead.
FROM3 Well (Without Transfer)	Spring	2013	Winter	2162	219	73.0	73.0	Irrigation of 73 acres will continue

ESPA Ground Water Rights Transfer Spreadsheet Data Summary

TRANSFER NO: 0
TRANSFER NAME: Double C Farms

PREPARED BY: Scott King, P.E. SPF Water Engineering, LLC
DATE: 10-Apr-13
Transfer Tool Version: Version 3.1

BLUE CELLS ARE SET UP FOR
USER ENTRIES

WATER RIGHTS INVOLVED:

Group 1 Transfer Rights		Group 2 Additional Mitigation Rights	
Right No.	Priority Date	Right No.	Priority Date
45-2382	8/14/1951	none	
45-2600A	1/21/1960		
45-13489	8/30/1985		
45-2600B	1/21/1960		
45-13470	8/30/1985		

HISTORIC BENEFICIAL USE:

Trans/Mit Rights (group no.)	Acres to Dry Up (ac)	Beneficial Use (af/yr)	Total (af/yr)
45-2382	116	3	348
45-2600A	43.8	3	130.8
45-13489	1.4	3	4.2
45-2600B	27.1	3	81.3
45-13470	0.9	3	2.7
	189		567 total per year 189 per trimester

MITIGATION NOTES:

None

MODEL CELL LOCATIONS:

	TO WELL	FROM1 WELL	FROM2 WELL	FROM3 WELL
ROW	96	91	92	92
COLUMN	46	47	46	43

	Start Date		End Date		Water Use		Acres Authorized (acres)	Notes
	Season	Year	Season	Year	Annual (af/yr)	Trimester (af/trimester)		
TO Well (Projected Use)	Spring	2013	Winter	2162	567.0	189.0	189.0	100% of water transferred to wells in cell R94 C44
FROM1 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	2/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 2 of 3 wells under this right located in cell R91 C47
FROM1 Well (Without Transfer)	Spring	2013	Winter	2162	232	77.3	77.3	Irrigation of 2/3 of 116 acres will continue
FROM2 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	1/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 1 of 3 wells under this right located in cell R92 C46
FROM2 Well (Without Transfer)	Spring	2013	Winter	2162	116	38.7	38.7	Irrigation of 1/3 of 116 acres will continue
FROM3 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	73 acres transferred from 45-2600A, 45-2600B, 45-13489 and 45-13470 will no longer be irrigated from the wells under this right. Wells are located in cells R91, C43 and R92, C43. Cell R92 C43 alone was selected for model simulation. Results are similar if Cell R91 C43 is used instead.
FROM3 Well (Without Transfer)	Spring	2013	Winter	2162	219	73.0	73.0	Irrigation of 73 acres will continue

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WATER RIGHTS INVOLVED:

Group 1 Transfer Rights		Group 2 Additional Mitigation Rights	
Right No.	Priority Date	Right No.	Priority Date
45-2382	6/14/1951	none	
45-2600A	1/21/1960		
45-13469	6/30/1985		
45-2600B	1/21/1980		
45-13470	6/30/1985		

HISTORIC BENEFICIAL USE:

Trans/Mit Rights (group no.)	Acres to Dry Up (ac)	Beneficial Use (af/yr)	Total (af/yr)
45-2382	116	3	348
45-2600A	43.8	3	130.8
45-13469	1.4	3	4.2
45-2600B	27.1	3	81.3
45-13470	0.9	3	2.7
	189		567 total per year 189 per trimester

MITIGATION NOTES:

None

MODEL CELL LOCATIONS:

	TO WELL	FROM1 WELL	FROM2 WELL	FROM3 WELL
ROW	94	91	92	92
COLUMN	44	47	46	43

	Start Date		End Date		Water Use		Acres Authorized (acres)	Notes
	Season	Year	Season	Year	Annual (af/yr)	Trimester (af/trimester)		
TO Well (Projected Use)	Spring	2013	Winter	2162	567.0	189.0	189.0	100% of water transferred to wells in cell R94 C44
FROM1 Well (With Transfer)	Spring	2012	Winter	2162	0	0.0	0.0	2/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 2 of 3 wells under this right located in cell R91, C47
FROM1 Well (Without Transfer)	Spring	2013	Winter	2162	282	77.1	77.1	Irrigation of 2/3 of 116 acres will continue.
FROM2 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	1/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 1 of 3 wells under this right located in cell R92, C46
FROM2 Well (Without Transfer)	Spring	2013	Winter	2162	116	38.7	38.7	Irrigation of 1/3 of 116 acres will continue.
FROM3 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	73 acres transferred from 45-2600A, 45-2600B, 45-13469, and 45-13470 will no longer be irrigated from the wells under this right. Wells are located in cells R91, C43 and R92, C43. Cell R92 C43 alone was selected for model simulation. Results are similar if Cell R91, C43 is used instead.
FROM3 Well (Without Transfer)	Spring	2013	Winter	2162	219	73.0	73.0	Irrigation of 73 acres will continue.

ESPA Ground Water Rights Transfer Spreadsheet Data Summary

TRANSFER NO: 0
TRANSFER NAME: Double C Farms

PREPARED BY: Scott King, P.E. SPW Water Engineering, LLC
DATE: 10-Apr-13
Transfer Tool Version: Version 3.1

BLUE CELLS ARE SET UP FOR
USER ENTRIES

WATER RIGHTS INVOLVED:

Group 1 Transfer Rights		Group 2 Additional Mitigation Rights	
Right No.	Priority Date	Right No.	Priority Date
45-2382	6/14/1961	none	
45-2600A	1/21/1960		
45-13469	6/30/1985		
45-2600B	1/21/1960		
45-13470	6/30/1985		

HISTORIC BENEFICIAL USE:

Trans/Mit Rights (group no.)	Acres to Dry Up (ac)	Beneficial Use (af/yr)	Total (af/yr)
45-2382	116	3	348
45-2600A	43.6	3	130.8
45-13469	1.4	3	4.2
45-2600B	27.1	3	81.3
45-13470	0.9	3	2.7
	189		567 total per year 189 per trimester

MITIGATION NOTES:

None

MODEL CELL LOCATIONS:

	TO WELL	FROM1 WELL	FROM2 WELL	FROM3 WELL
ROW	94	91	92	91
COLUMN	44	47	46	43

	Start Date		End Date		Water Use		Acres Authorized (acres)	Notes
	Season	Year	Season	Year	Annual (af/yr)	Trimester (af/trimester)		
TO Well (Projected Use)	Spring	2013	Winter	2162	567.0	189.0	189.0	100% of water transferred to wells in cell R94 C44
FROM1 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	2/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 2 of 3 wells under this right located in cell R91 C47
FROM1 Well (Without Transfer)	Spring	2013	Winter	2162	232	77.3	77.3	Irrigation of 2/3 of 116 acres will continue
FROM2 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	1/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 1 of 3 wells under this right located in cell R92 C46
FROM2 Well (Without Transfer)	Spring	2013	Winter	2162	116	38.7	38.7	Irrigation of 1/3 of 116 acres will continue
FROM3 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	73 acres transferred from 45-2600A, 45-2600B, 45-13469, and 45-13470 will no longer be irrigated from the wells under this right. Wells are located in cells R91 C43 and R92, C43. Cell R91 C43 alone was selected for model simulation. Results are similar if Cell R92 C43 is used instead
FROM3 Well (Without Transfer)	Spring	2013	Winter	2162	219	73.0	73.0	Irrigation of 73 acres will continue

ESPA Ground Water Rights Transfer Spreadsheet Data Summary

TRANSFER NO: 0
TRANSFER NAME: Double C Farms

PREPARED BY: Scott King, P.E. SPF Water Engineering, LLC
DATE: 10-Apr-13
Transfer Tool Version: Version 3.1

BLUE CELLS ARE SET UP FOR USER ENTRIES

WATER RIGHTS INVOLVED:

Group 1 Transfer Rights		Group 2 Additional Mitigation Rights	
Right No	Priority Date	Right No	Priority Date
45-2382	6/11/1951	none	
45-2600A	1/21/1960		
45-13469	6/30/1985		
45-2600B	1/21/1960		
45-13470	6/30/1985		

HISTORIC BENEFICIAL USE:

Trans/Mit Rights (group no.)	Acres to Dry Up (ac)	Beneficial Use (af/yr)	Total (af/yr)
45-2382	116	3	348
45-2600A	43.6	2	130.6
45-13469	1.4	3	4.2
45-2600B	27.1	3	81.3
45-13470	0.9	3	2.7
	189		567 total per year 189 per trimester

MITIGATION NOTES:

None

MODEL CELL LOCATIONS:

	TO WELL	FROM1 WELL	FROM2 WELL	FROM3 WELL
ROW	58	91	92	91
COLUMN	45	47	46	43

	Start Date		End Date		Water Use		Acres Authorized (acres)	Notes
	Season	Year	Season	Year	Annual (af/yr)	Trimester (af/trimester)		
TO Well (Projected Use)	Spring	2013	Winter	2162	567.0	189.0	189.0	100% of water transferred to wells in cell R94 C44
FROM1 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	2/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 2 of 3 wells under this right located in cell R91 C47
FROM1 Well (Without Transfer)	Spring	2013	Winter	2162	232	77.3	77.3	Irrigation of 2/3 of 116 acres will continue
FROM2 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	1/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 1 of 3 wells under this right located in cell R92 C46
FROM2 Well (Without Transfer)	Spring	2013	Winter	2162	116	38.7	38.7	Irrigation of 1/3 of 116 acres will continue
FROM3 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	73 acres transferred from 45-2600A, 45-2600B, 45-13469, and 45-13470 will no longer be irrigated from the wells under this right. Wells are located in cells R91, C43 and R92, C43. Cell R91 C43 alone was selected for model simulation. Results are similar if Cell R92, C43 is used instead.
FROM3 Well (Without Transfer)	Spring	2013	Winter	2162	219	73.0	73.0	Irrigation of 73 acres will continue

ESPA Ground Water Rights Transfer Spreadsheet Data Summary

TRANSFER NO: 0
TRANSFER NAME: Double C Farms

PREPARED BY: Scott King, P.E. SPF Water Engineering, LLC
DATE: 10-Apr-13
Transfer Tool Version: Version 3.1

BLUE CELLS ARE SET UP FOR
USER ENTRIES

WATER RIGHTS INVOLVED:

Group 1 Transfer Rights		Group 2 Additional Mitigation Rights	
Right No.	Priority Date	Right No.	Priority Date
45-2382	6/14/1951	none	
45-2800A	1/21/1960		
45-13469	6/30/1985		
45-2800B	1/21/1960		
45-13470	6/30/1985		

HISTORIC BENEFICIAL USE:

Trans/Mit. Rights (group no.)	Acres to Dry Up (ac)	Beneficial Use (af/yr)	Total (af/yr)
45-2382	116	3	348
45-2800A	43.8	3	130.8
45-13469	1.4	3	4.2
45-2800B	27.1	3	81.3
45-13470	6.9	3	2.7
	189		567 total per year 189 per trimester

MITIGATION NOTES:

None

MODEL CELL LOCATIONS:

	TO WELL	FROM1 WELL	FROM2 WELL	FROM3 WELL
ROW	95	91	92	91
COLUMN	41	47	46	43

	Start Date		End Date		Water Use		Acres Authorized (acres)	Notes
	Season	Year	Season	Year	Annual (af/yr)	Trimester (af/trimester)		
TO Well (Projected Use)	Spring	2013	Winter	2162	567.0	189.0	189.0	100% of water transferred to wells in cell R95 C41.
FROM1 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	2/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 2 of 3 wells under this right located in cell R91 C47
FROM1 Well (Without Transfer)	Spring	2013	Winter	2162	232	77.3	77.3	Irrigation of 2/3 of 116 acres will continue
FROM2 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	1/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 1 of 3 wells under this right located in cell R92 C46
FROM2 Well (Without Transfer)	Spring	2013	Winter	2162	116	38.7	38.7	Irrigation of 1/3 of 116 acres will continue
FROM3 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	73 acres transferred from 45-2800A, 45-2800B, 45-13469, and 45-13470 will no longer be irrigated from the wells under this right. Wells are located in cells R91, C43 and R92, C43. Cell R91 C43 alone was selected for model simulation. Results are similar if Cell R92, C43 is used instead
FROM3 Well (Without Transfer)	Spring	2013	Winter	2162	219	73.0	73.0	Irrigation of 73 acres will continue

ESPA Ground Water Rights Transfer Spreadsheet Data Summary

TRANSFER NO: 0
TRANSFER NAME: Double C Farms

PREPARED BY: Scott King, P.E., SPF Water Engineering, LLC
DATE: 10-Apr-13
Transfer Tool Version: Version 3.1

BLUE CELLS ARE SETUP FOR
USER ENTRIES

WATER RIGHTS INVOLVED:

Group 1 Transfer Rights		Group 2 Additional Mitigation Rights	
Right No.	Priority Date	Right No.	Priority Date
45-2382	6/14/1951	none	
45-2600A	1/21/1960		
45-13469	6/30/1985		
45-2600B	1/21/1960		
45-13470	6/30/1985		

HISTORIC BENEFICIAL USE:

Trans/Mit. Rights (group no.)	Acres to Dry Up (ac)	Beneficial Use (af/yr)	Total (af/yr)
45-2382	116	3	348
45-2600A	43.6	3	130.8
45-13469	1.4	3	4.2
45-2600B	27.1	3	81.3
45-13470	0.9	3	2.7
	189		567 total per year 189 per trimester

MITIGATION NOTES:

None

MODEL CELL LOCATIONS:

	TO WELL	FROM1 WELL	FROM2 WELL	FROM3 WELL
ROW	94	91	92	91
COLUMN	41	47	46	43

	Start Date		End Date		Water Use		Acres Authorized (acres)	Notes
	Season	Year	Season	Year	Annual (af/yr)	Trimester (af/trimester)		
TO Well (Projected Use)	Spring	2013	Winter	2182	567.0	189.0	189.0	100% of water transferred to wells in cell R94 C41
FROM1 Well (With Transfer)	Spring	2013	Winter	2182	0	0.0	0.0	2/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 2 of 3 wells under this right located in cell R91 C47
FROM1 Well (Without Transfer)	Spring	2013	Winter	2182	232	77.3	77.3	Irrigation of 2/3 of 116 acres will continue
FROM2 Well (With Transfer)	Spring	2013	Winter	2182	0	0.0	0.0	1/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 1 of 3 wells under this right located in cell R92 C46
FROM2 Well (Without Transfer)	Spring	2013	Winter	2182	116	38.7	38.7	Irrigation of 1/3 of 116 acres will continue
FROM3 Well (With Transfer)	Spring	2013	Winter	2182	0	0.0	0.0	72 acres transferred from 45-2600A, 45-2600B, 45-13469 and 45-13470 will no longer be irrigated from the wells under this right. Wells are located in cells R91, C43 and R92, C43. Cell R91 C43 alone was selected for model simulation. Results are similar if Cell R92, C43 is used instead.
FROM3 Well (Without Transfer)	Spring	2013	Winter	2182	219	73.0	73.0	Irrigation of 73 acres will continue

ESPA Ground Water Rights Transfer Spreadsheet Data Summary

TRANSFER NO: 0
TRANSFER NAME: Double C Farms

PREPARED BY: Scott King, P.E. SPF Water Engineering, LLC
DATE: 10-Apr-13
Transfer Tool Version: Version 3.1

BLUE CELLS ARE SET UP FOR
USER ENTRIES

WATER RIGHTS INVOLVED:

Group 1 Transfer Rights		Group 2 Additional Mitigation Rights	
Right No.	Priority Date	Right No.	Priority Date
45-2382	6/14/1961	none	
45-2600A	1/21/1960		
45-13489	8/30/1965		
45-2600B	1/21/1960		
45-13470	6/30/1965		

HISTORIC BENEFICIAL USE:

Trans/Mit Rights (group no.)	Acres to Dry Up (ac)	Beneficial Use (af/yr)	Total (af/yr)
45-2382	116	3	348
45-2600A	43.6	3	130.8
45-13489	1.4	3	4.2
45-2600B	27.1	3	81.3
45-13470	0.9	3	2.7
	189		567 total per year 189 per trimester

MITIGATION NOTES:

None

MODEL CELL LOCATIONS:

	TO WELL	FROM1 WELL	FROM2 WELL	FROM3 WELL
ROW	94	91	92	91
COLUMN	42	47	46	43

	Start Date		End Date		Water Use		Acres Authorized (acres)	Notes
	Season	Year	Season	Year	Annual (af/yr)	Trimester (af/trimester)		
TO Well (Projected Use)	Spring	2013	Winter	2162	567.0	189.0	189.0	100% of water transferred to wells in cell R94 C42
FROM1 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	2/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 2 of 3 wells under this right located in cell R91 C47
FROM1 Well (Without Transfer)	Spring	2013	Winter	2162	232	77.3	77.3	Irrigation of 2/3 of 116 acres will continue
FROM2 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	1/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 1 of 3 wells under this right located in cell R92 C46
FROM2 Well (Without Transfer)	Spring	2013	Winter	2162	113	38.7	38.7	Irrigation of 1/3 of 116 acres will continue
FROM3 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	73 acres transferred from 45-2600A, 45-2600B, 45-13489 and 45-13470 will no longer be irrigated from the wells under this right. Wells are located in cells R91, C43 and R92, C42. Cell R91 C43 alone was selected for model simulation. Results are similar if Cell R92, C43 is used instead
FROM3 Well (Without Transfer)	Spring	2013	Winter	2162	219	73.0	73.0	Irrigation of 73 acres will continue

ESPA Ground Water Rights Transfer Spreadsheet Data Summary

TRANSFER NO: 0
TRANSFER NAME: Double C Farms

PREPARED BY: Scott King, P.E. SPF Water Engineering, LLC
DATE: 10-Apr-13
Transfer Tool Version: Version 3.1

BLUE CELLS ARE SET UP FOR
USER ENTRIES

WATER RIGHTS INVOLVED:

Group 1 Transfer Rights		Group 2 Additional Mitigation Rights	
Right No.	Priority Date	Right No.	Priority Date
45-2382	6/14/1951	none	
45-2600A	1/21/1960		
45-13469	6/30/1985		
45-2600B	1/21/1960		
45-13470	6/30/1985		

HISTORIC BENEFICIAL USE:

Trans/Mit Rights (group no.)	Acres to Dry Up (ac)	Beneficial Use (af/yr)	Total (af/yr)
45-2382	116	3	348
45-2600A	43.8	3	130.8
45-13469	1.4	3	4.2
45-2600B	27.1	3	81.3
45-13470	0.8	3	2.7
	189		567 total per year 189 per trimester

MITIGATION NOTES:

None

MODEL CELL LOCATIONS:

	TQ WELL	FROM1 WELL	FROM2 WELL	FROM3 WELL
ROW	85	91	92	91
COLUMN	43	47	48	43

	Start Date		End Date		Water Use		Acres Authorized (acres)	Notes
	Season	Year	Season	Year	Annual (af/yr)	Trimester (af/trimester)		
TO Well (Projected Use)	Spring	2013	Winter	2162	567.0	189.0	189.0	100% of water transferred to wells in cell R95 C43
FROM1 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	2/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 2 of 3 wells under this right located in cell R91 C47
FROM1 Well (Without Transfer)	Spring	2013	Winter	2162	232	77.3	77.3	Irrigation of 2/3 of 116 acres will continue
FROM2 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	1/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 1 of 3 wells under this right located in cell R92 C46
FROM2 Well (Without Transfer)	Spring	2013	Winter	2162	118	38.7	38.7	Irrigation of 1/3 of 116 acres will continue
FROM3 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	73 acres transferred from 45-2600A, 45-2600B, 45-13469, and 45-13470 will no longer be irrigated from the wells under this right. Wells are located in cells R91, C43 and R92, C43. Cell R91 C43 alone was selected for model simulation. Results are similar if Cell R92, C43 is used instead.
FROM3 Well (Without Transfer)	Spring	2013	Winter	2162	219	73.0	73.0	Irrigation of 73 acres will continue

ESPA Ground Water Rights Transfer Spreadsheet Data Summary

TRANSFER NO: 0
TRANSFER NAME: Double C Farms

PREPARED BY: Scott King, P.E., SPF Water Engineering, LLC
DATE: 10-Apr-13
Transfer Tool Version: Version 3.1

BLUE CELLS ARE SET UP FOR USER ENTRIES

WATER RIGHTS INVOLVED:

Group 1 Transfer Rights		Group 2 Additional Mitigation Rights	
Right No.	Priority Date	Right No.	Priority Date
45-2382	6/14/1961	none	
45-2600A	1/21/1960		
45-13469	6/30/1965		
45-2600B	1/21/1960		
45-13470	6/30/1965		

HISTORIC BENEFICIAL USE:

Trans/Mit Rights (group no.)	Acres to Dry Up (ac)	Beneficial Use (af/yr)	Total (af/yr)
45-2382	116	3	348
45-2600A	43.8	3	130.8
45-13469	1.4	3	4.2
45-2600B	27.1	3	81.3
45-13470	0.8	3	2.7
	189		567 total per year 189 per trimester

MITIGATION NOTES:

No. 10

MODEL CELL LOCATIONS:

	TO WELL	FROM1 WELL	FROM2 WELL	FROM3 WELL
ROW	95	91	92	91
COLUMN	46	47	48	43

	Start Date		End Date		Water Use		Acres Authorized (acres)	Notes
	Season	Year	Season	Year	Annual (af/yr)	Trimester (af/trimester)		
TO Well (Projected Use)	Spring	2013	Winter	2162	567.0	189.0	189.0	100% of water transferred to wells in cell R95 C46
FROM1 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	2/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 2 of 3 wells under this right located in cell R91 C47
FROM1 Well (Without Transfer)	Spring	2013	Winter	2162	232	77.3	77.3	Irrigation of 2/3 of 116 acres will continue
FROM2 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	1/3 of 116 acres transferred from 45-2382 will no longer be irrigated from the 1 of 3 wells under this right located in cell R92 C48
FROM2 Well (Without Transfer)	Spring	2013	Winter	2162	116	38.7	38.7	Irrigation of 1/3 of 116 acres will continue
FROM3 Well (With Transfer)	Spring	2013	Winter	2162	0	0.0	0.0	73 acres transferred from 45-2600A, 45-2600B, 45-13469, and 45-13470 will no longer be irrigated from the wells under this right. Wells are located in cells R91 C43 and R92 C43. Cell R91 C43 alone was selected for model simulation. Results are similar if Cell R92 C48 is used instead
FROM3 Well (Without Transfer)	Spring	2013	Winter	2162	219	73.0	73.0	Irrigation of 73 acres will continue