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Attorneys for A&B Irrigation District

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF THE MITIGATION PLAN FILED BY A&B IRRIGATION DISTRICT FOR THE DISTRIBUTION OF WATER TO WATER RIGHT NOS. 36-02551 AND 36-07694 IN THE NAME OF RANGEN, INC.	)	**CM-MP-2014-____** **A&B IRRIGATION DISTRICT'S RULE 43 MITIGATION PLAN**

COMES NOW, A&B IRRIGATION DISTRICT ("A&B"), by and through its counsel of record, BARKER ROSHOLT & SIMPSON LLP, and hereby submits this Mitigation Plan ("Plan") pursuant to Rule 43 of the Department's Conjunctive Management Rules (37.03.11.43) in the above-captioned matter for A&B's water rights 36-15127B, 36-15193B, 36-15194B, 36-15195B, and 36-15196B ("Enlargement Rights"). As detailed below, diversion of ground water under A&B's Enlargement Rights (with a 1994 subordination condition) is fully mitigated by the substitute curtailment actions performed within the A&B project and therefore the water rights should not be curtailed in response to Rangen's water delivery call.

MITIGATION PLAN

I. Name and Address:

A&B Irrigation District
P.O. Box 675
Rupert, Idaho 83350-0675
(208) 436-3152

II. Water Rights to be Mitigated By Plan:

36-15127B
36-15193B
36-15194B
36-15195B
36-15196B

III. Description of Plan:

A&B has curtailed the diversion of groundwater under its senior priority water right (36-2080) for the irrigation of 1,377.8 acres within the Unit B portion of the irrigation district. *See* Ex. A. A&B has converted the 1,378 acres (Ex. A) from groundwater to a surface water supply of A&B Irrigation District, consisting of stored water in American Falls and Palisades Reservoirs (water rights as recommended in the SRBA Court, 1-2064, 1-2068). Pursuant to analysis performed by Brockway Engineering using the Eastern Snake Plain Aquifer Model 2.1 (ESPAM), diversion of groundwater for the acres served by A&B's Enlargement Rights (2,063 acres), would result in depletion to the Rangen cell of 72 acre-feet per year (45.5 acre-feet per year at the Curren Tunnel). *See* Ex. B. Using the same analysis, A&B's conversion of the 1,378 acres from groundwater to a surface water supply would result in an increase of 75 acre-feet per year (47 acre-feet per year at the Curren Tunnel). *See id.*

In addition, A&B's use of surface water on the acres previously irrigated with groundwater provides additional incidental recharge to the ESPA in the amount of 11 acre-feet per year to the Rangen cell (7.2 acre-feet per year at the Curren Tunnel). *See id.* Finally, A&B has enrolled 121 acres in the federal CREP program (Ex. C identifies acres), which results in 3.5 acre-feet per year to the Rangen cell (2.2 acre-feet per year at the Curren Tunnel). *See* Ex. B. Therefore, ground water will be voluntarily curtailed under water right 36-2080 and will no longer be used on those acres for the duration of the program. Consequently, A&B's depletion and benefits from its mitigation actions are detailed as follows:

Depletions:

Action	Impact to Rangen Cell
GW Irrigation – 2,063 acres	0.10 cfs / 72 af (0.06 cfs / 45.5 af)
Total Mitigation Obligation	0.10 cfs / 72 af (0.06 cfs / 45.5 af)

Mitigation Benefits:

Action	Benefit to Rangen Cell
Conversions – 1,378 acres	0.10 cfs / 75 af (0.06 cfs / 47 af)
Incidental Recharge[1]	0.02 cfs / 11 af (0.01 cfs / 7.2 af)
CREP	0.00 cfs / 3.5 af (0.00 cfs / 2.2 af)
Total Mitigation Performed	0.12 cfs / 89.5 af (0.07 cfs / 51.3 af)

[1] The percentage used in ESPAM 2.1 is 15% whereas A&B previously provided information in a mitigation plan for Blue Lakes Trout Co. that was estimated at 22%. A&B does not waive any rights with respect to this estimate and reserves the right to provide additional information if needed, however since 15% is more conservative A&B has used that for purposes of this plan.

As detailed above, A&B's actions completely mitigate for the depletions resulting from the use of the Enlargement Rights. The Mitigation Plan provides replacement water "at the time and place required by the senior-priority water right, sufficient to offset the depletive effect of ground water withdrawal on the water available in the surface or ground water source at such time and place as necessary to satisfy" Rangen's water right. *See* CMR 43.03.b.

The Plan is based upon appropriate simulations and calculations using ESPAM 2.1, and such simulations and calculations were performed by Erick Powell (Brockway Engineering). *See* CMR 43.03.e; Exs. B, C.

REQUEST FOR RELIEF

A&B hereby requests IDWR to process this plan as soon as possible. A&B further requests the Director to approve this plan in conformance with the procedures and criteria set forth in CMR 43.

DATED this 7th day of March, 2014.

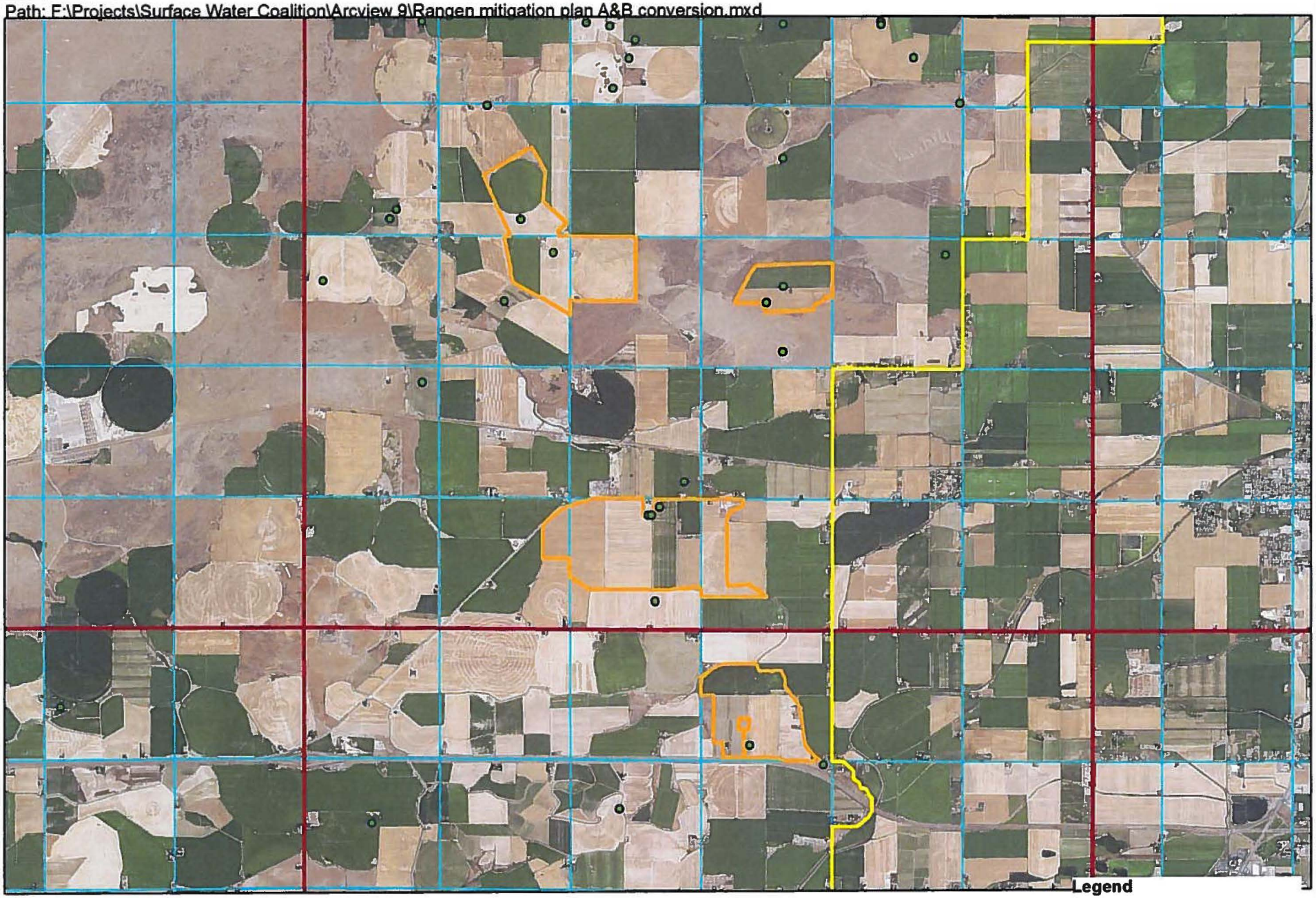
BARKER ROSHOLT & SIMPSON LLP

Travis L. Thompson
Paul L. Arrington
Sarah W. Higer

Attorneys for A & B Irrigation District

Exhibit
A

Path: F:\Projects\Surface Water Coalition\Arcview 9\Rangen mitigation plan A&B conversion.mxd



Legend

- A&B Wells
- 2014 Conversion Land
- A&B Irrigation District

N

A&B IRRIGATION DISTRICT CONVERSION ACRES
RANGEN CALL MITIGATION PLAN FOR A&B IRRIGATION DISTRICT
NAIP 2013 AERIAL PHOTOGRAPH

BROCKWAY ENGINEERING, PLLC
GEP - MARCH 6, 2014

Exhibit
B

A&B Depletions

Select USBOR Wells within A&B: Total = 184

Select water rights 36-15127B, 36-15195B, 36-15196B, 36-15193B, 36-15194B

These rights are junior to Rangen, Inc. injured right (7/13/1962)

All water rights are associated with 184 USBOR wells

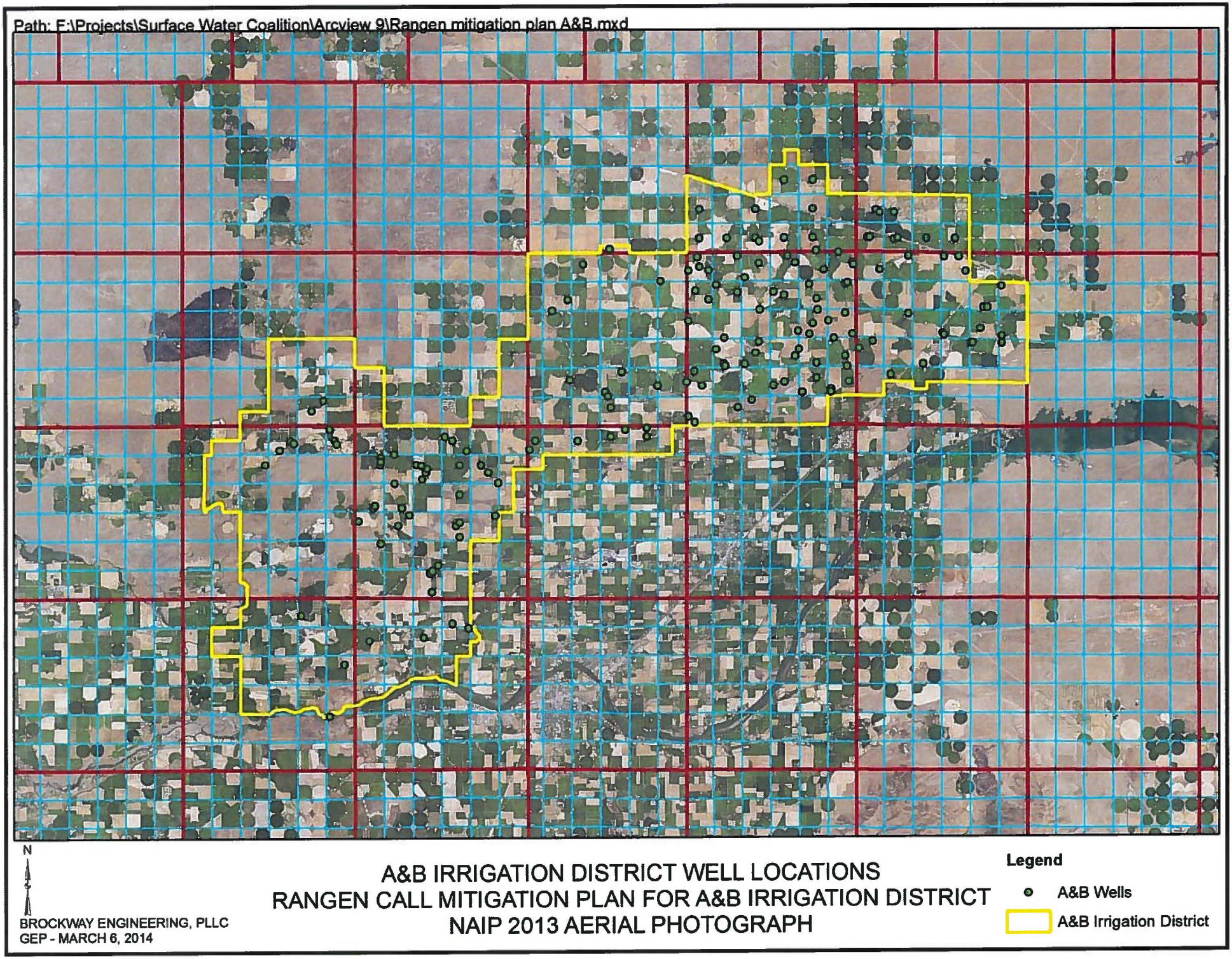
Total junior acres = 2063.1 acres

Average ET demand per acre = 2.103751 ft/ac/yr

Distribute junior acres evenly between 184 wells = 23.588 acft/well/yr or 2813.12 ft3/day

Irr_area	Depleation	ft/ac/yr
8349102.881 m2	517,624 ft3/day	2.103751
2063.1 acres	4,340 acft/yr	

Reach	cfs impact	ac-ft/yr
A-R	0.08 cfs	61 acft/yr
H-S	0.25 cfs	179 acft/yr
S-NB	0.74 cfs	536 acft/yr
NB-N	2.34 cfs	1698 acft/yr
N-M	0.13 cfs	93 acft/yr
DWB-BUL	0.74 cfs	533 acft/yr
BUL-KSP	0.80 cfs	578 acft/yr
KSP	0.35 cfs	257 acft/yr
KSP-MLD	0.22 cfs	162 acft/yr
MLD	0.20 cfs	148 acft/yr
MLD-BAN	0.01 cfs	9 acft/yr
Total	5.87 cfs	4254 acft/yr
Rangen (cell 42,13)	0.10 cfs	72 acft/yr
Rangen (tunnel = 63% cell)	0.06 cfs	45.5 acft/yr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A&B IRRIGATION DISTRICT WELL LOCATIONS
RANGEN CALL MITIGATION PLAN FOR A&B IRRIGATION DISTRICT
NAIP 2013 AERIAL PHOTOGRAPH
Legend
A&B Wells
A&B Irrigation District
BROCKWAY ENGINEERING, PLLC
GEP - MARCH 6, 2014

Conversion Land

From A&B Mitigation Plan of converted acres
Area = 1377.8 acres
Volume = 3870.27 acft/yr

Irr_area	Benefit	ft/ac/yr
5575781 m2	461,888 ft3/day	2.810934 ft/ac/yr
1377.8 acres	3870.3 acft/yr	

Reach	cfs impact	ac-ft/yr
A-R	0.06 cfs	46 acft/yr
H-S	0.18 cfs	134 acft/yr
S-NB	0.55 cfs	401 acft/yr
NB-N	1.76 cfs	1272 acft/yr
N-M	0.10 cfs	73 acft/yr
DWB-BUL	0.88 cfs	639 acft/yr
BUL-KSP	0.83 cfs	599 acft/yr
KSP	0.37 cfs	265 acft/yr
KSP-MLD	0.23 cfs	167 acft/yr
MLD	0.21 cfs	152 acft/yr
MLD-BAN	0.01 cfs	9 acft/yr
Total	5.19 cfs	3758 acft/yr
Rangen (cell 42,13)	0.10 cfs	75 acft/yr
Rangen (tunnel = 63% cell)	0.06 cfs	47 acft/yr

A&B Incidental Recharge from Conversion Deliveries

Worstell Method calculations made by CE Brockway, August 6, 2009

Used Worstell Method for determining conveyance loss

Loss: B = 0.667*I*W

S = Seepage loss – ft/mile

I = Seepage rate – ft/day; based on Portneuf silt loam soil, Hubble Report

W = Canal Water Surface width – ft

Volume based on reported April – September operation deliveries by A&B

Main Canal and Laterals to Conversions Acres (Groundwater B to Surface A)

All channels in Portneuf Silt Loam

Canal Capacity = 270 cfs

I = 0.5

Canal	Length (ft)	Length (miles)	Width (ft)	Loss (cfs/mile)	Loss (cfs)
LAT Main	24830	4.7	32	10.67	50.19
LATMMain	3475	0.66	25	8.34	5.49
LATG3.9	1523	0.29	14	4.67	1.35
LATG	1664	0.32	10	3.34	1.05
				Sum	58.07
				% of Capacity	0.22

Worstell method predicts approximately 22% seepage. A&B Canal seepage in ESPAM 2.1 is approximately 15%. Therefore 15% is the most conservative number.

Delivery to conversions: 3870 acft/year

Conveyance Loss from conversion delivery: 580 acft/year or 15% of delivery

Reach	cfs impact	ac-ft/yr
A-R	0.01 cfs	6 acft/yr
H-S	0.02 cfs	17 acft/yr
S-NB	0.07 cfs	50 acft/yr
NB-N	0.22 cfs	159 acft/yr
N-M	0.01 cfs	9 acft/yr
DWB-BUL	0.14 cfs	104 acft/yr
BUL-KSP	0.13 cfs	92 acft/yr
KSP	0.06 cfs	41 acft/yr
KSP-MLD	0.04 cfs	26 acft/yr
MLD	0.03 cfs	23 acft/yr
MLD-BAN	0.00 cfs	1 acft/yr
Total	0.73 cfs	528 acft/yr
Rangen (cell 42,13)	0.02 cfs	11 acft/yr
Rangen (tunnel = 63% cell)	0.01 cfs	7.2 acft/yr

Exhibit
C

A&B CREP

Irr_area	Non-Depleation	ft/ac/yr
488391 m2	25488 ft3/day	1.770855 ft/ac/yr
121 acres	214 acft/yr	

Reach	cfs impact	ac-ft/yr
A-R	0.00 cfs	3 acft/yr
H-S	0.01 cfs	9 acft/yr
S-NB	0.04 cfs	28 acft/yr
NB-N	0.12 cfs	88 acft/yr
N-M	0.01 cfs	5 acft/yr
DWB-BUL	0.03 cfs	24 acft/yr
BUL-KSP	0.04 cfs	28 acft/yr
KSP	0.02 cfs	12 acft/yr
KSP-MLD	0.01 cfs	8 acft/yr
MLD	0.01 cfs	7 acft/yr
MLD-BAN	0.00 cfs	0 acft/yr
Total	0.29 cfs	212 acft/yr
Rangen (cell 42,13)	0.00 cfs	3.5 acft/yr
Rangen (tunnel = 63% cell)	0.00 cfs	2.2 acft/yr

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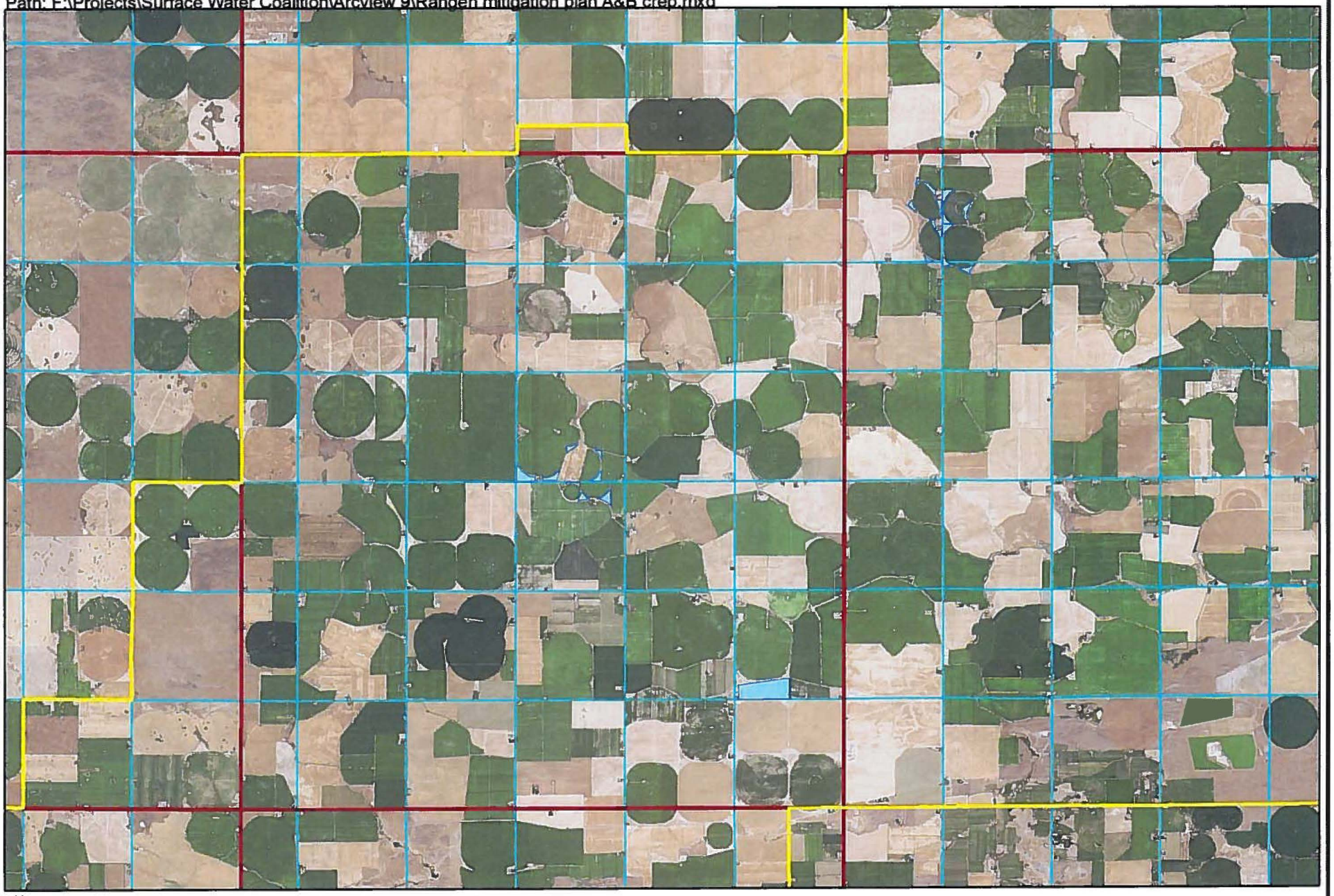

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BROCKWAY ENGINEERING, PLLC
GEP - MARCH 6, 2014

A&B IRRIGATION DISTRICT CREP ACRES
RANGEN CALL MITIGATION PLAN FOR A&B IRRIGATION DISTRICT
NAIP 2013 AERIAL PHOTOGRAPH

Legend

- A&B CREP
- A&B Irrigation District