Memorandum

To: Idaho Water Resource Board

From: Wesley Hipke

Date: September 3, 2019

Re: ESPA Managed Recharge Program Status Report

I. ESPA Managed Recharge Program Fall Activities

The following is a list of ESPA Managed Recharge Program (program) activities identified for this fall:

- Complete necessary analyses for the 10-year ESPA Progress Report.
- Coordinate delivery of storage water donated by the Surface Water Coalition (SWC) for managed recharge. This is storage water provided to the SWC by the Idaho Ground Water Association (IGWA) and Water Mitigation Coalition (WMC -- food processors) as per the corresponding SWC settlement agreement (recharge of this water started August 22, 2019).
- Coordinate the managed recharge for the Eastern Snake Plain Cities as per the agreement between the Cities, SWC, and IGWA.
- Meet with program partners in the Lower Valley in October to optimize the program's Lower Valley recharge for the 2019/2020 season.
- The next Environmental Resources Technical Working Group for Lower Valley IWRB recharge will be held in November on the 6, 2019.
- Develop new long-term (5-year) conveyance contracts with program partners in the Lower Valley.
- Coordinate with the Protestants of the IWRB's recharge water right applications on the Upper Snake River, Big Wood and Little Wood Rivers to try to reach a settlement.
- Continue implementation of various monitoring activities including:
    - Preparation and preliminary work for a fall dye test at the new Wilson Canyon site and a spring test at the Egin Lakes site.
    - Expand the transducer monitoring network in areas that the IWRB conducts managed recharge.
    - Improve automated measurements of surface water diversions and return flows associated with IWRB managed recharge.

II. 2019/2020 IWRB Recharge

As part of SWC's settlement agreements, the Water Mitigation Coalition supplied 8,500 acre-feet (af) and IGWA supplied 50,000 af of mitigation storage water to the SWC for a total of 58,500 af. The SWC settlement agreement states: "Any excess storage water will be used for targeted conversions and recharge as determined by SWC and IGWA". This year, the SWC and IGWA agreed to turn the excess storage water (all 58,500 af) over to the IWRB for recharge. The current plan is to recharge all of the water from SWC settlement agreements in the Upper Valley.

Consistent with protocol set forth in previous years, the IWRB will deliver storage water donated by SWC for recharge as follows:

- This storage water will not count towards mitigation of ground water pumping.
- The IWRB will not compensate the SWC (or the original purchasers) for the cost of the storage water; however, the IWRB will pay the established wheeling fees for conveyance of the recharge water.
- The IWRB will make its best effort to recharge the storage water upstream of American Falls Reservoir (Upper Valley) to support the intent of the SWC Settlement Agreement.

Natural Flow Water Availability:

Water District 01 reported that the reservoir system is 55% full and has predicted that system carryover will be slightly above average this year. Water District 01 also noted that total diversions above Milner during the last week of August and first week of September were the highest diversions in over 20 years. In addition, reach-gains from Blackfoot to Milner in July and August were the highest in 20 years. The Bureau of Reclamation's (USBR) preliminary reservoir operation plan is to maintain a minimum flow from Minidoka Dam (550 cfs) during the fall (per Upper Snake Advisory Committee meeting on September 4, 2019). At this time, natural flow is not predicted to be available in the Upper Valley for managed recharge.

Lower Valley IWRB Recharge Status:

The IWRB recharge rights on the Snake River are predicted to come into priority in the Lower Valley (below Minidoka Dam) around October 20, 2019. A meeting with the IWRB's Lower Valley recharge partners is planned for the first part of October to discuss the upcoming recharge season, and specifically to coordinate canal maintenance requirements and recharge activities.

Construction of the MP 29 recharge site on AFRD2's Milner-Gooding Canal will influence recharge water delivery. Based on the current construction schedule, AFRD2 plans to begin diverting recharge water through the Milner-Gooding Canal the first of December.

The fall recharge capacity is projected to be around 320 cfs, with recharge occurring at Southwest Irrigation District (SWID), Twin Falls Canal Company (TWCC), and North Side Canal Company (NSCC). This projection assumes NSCC's Wilson Canyon site is capable of recharging at least 100 cfs. Once the Milner-Gooding Canal is operational, the IWRB's program capacity in the Lower Valley is estimated to be around 1,200 cfs.

IWRB Recharge 2019/2020 Projections:

Recharge projections for the 2019/2020 season will continue to be updated as water supply information becomes available. Assuming limited water availability during the fall and a moderate increase (up to 800 cfs) in December, the current projection for IWRB managed recharge is 220,000 af. In cooperation with the IWRB's recharge partners and stakeholders, efforts will continue throughout the recharge season to maximize managed recharge with the water available.

III. 2018/2019 IWRB Recharge Summary

2018/2019 IWRB Recharge Summary:

The following provides a brief final summary for the 2018/2019 IWRB recharge season. Diversion of recharge water under the IWRB's natural flow recharge water rights started in the Lower Valley below Minidoka Dam on October 22, 2018 and in the Upper Valley on February 22, 2019. IWRB managed recharge continued through June 6, 2019, with the exception of a five-day shutdown in the middle of May. The IWRB was able to recharge over 309,000 af of water into the aquifer this last season.

The SWC donated the excess storage water provided by IGWA and WMC as part of the SWC Settlement Agreement to the IWRB for managed recharge in the ESPA. The recharge of this storage water began on August 16, 2018 and was completed by November 3, 2018.

Table 1 summarizes the IWRB recharge activities for the 2018/2019 recharge season.

Table 1. IWRB Recharge Summary – 2018/2019

Source Water	Area	Start / End of Recharge	Duration of Recharge (Days)	Median Recharge Rate (cfs)	Volume Recharged (Acre-feet)*	IWRB Delivery Cost*
SWC Storage Water	Upper Valley	Aug 16 - Nov 3	**80**	**302**	**53,769**	**$327,455**
Snake River	Lower Valley	Oct 26 – Jun 6	223	549	225,205	$1,732,651
	Upper Valley	Feb 22 – Jun 6	93	160	77,299	$479,173
	Snake River Total		**223**	**561**	**302,503**	**$2,210,824**
Big/Little Wood River	Big Wood Canal Co.	Nov 19 – Apr 17	**150**	**23**	**6,804**	**$75,499**
Total Natural Flow			**223**	**611**	**309,308**	**$2,286,323**

*Recharge volumes and cost are not final. Values may be adjusted as the numbers are finalized with the canal companies.

IV. ESPA Recharge Program Projects and Buildout Activities

The IWRB has actively supported development of additional recharge capacity throughout the ESPA to meet the managed recharge goal of an average 250,000 af/yr. For managed recharge projects involving infrastructure improvements to which the IWRB provided funding, a Memorandum of Intent (MOI) was developed to establish a long-term agreement (twenty years) between the IWRB and the entity implementing the project. The MOI acknowledges: 1) the IWRB provided financial assistance for a project; and 2) the entity agreed to deliver and prioritize delivery of the IWRB's recharge water as compensation for financial assistance from the IWRB.

ESPA Managed Recharge Infrastructure Project Summary:

The IWRB allocated over $20 million dollars from 2013 through fiscal year 2020 for infrastructure improvements to increase managed recharge throughout the ESPA. In fiscal year 2020, the IWRB budgeted $5 million for development of managed recharge infrastructure throughout the ESPA. The status of the current projects in the Lower and Upper Valleys is included in Tables 2 and 3, respectively. A summary of the projected recharge projects is presented in Table 4.

Table 2. Current IWRB ESPA Managed Recharge Projects - Lower Valley

IWRB Partner	Project Name	Project Type	Status	Approved Funds	Scheduled Completion	**Description /** Key Items
AFRD2	Dietrich Drop Hydro Plant Winter By-pass	Design / Construction	Active	$1,500,000	Nov 2019	**Winter recharge by-pass of the Dietrich Drop Power Plant** • Finalize cost and project schedule – May 2018 • Constr. of tail race gate & bypass improv. – Jan 2019 • Final FERC submittal for forebay improv. – Sept 2019 • Construction of forebay improv. – Oct/Nov 2019
AFRD2	MP 28 Hydro Plant Tailbay	Construction	Active	$1,400,000	Nov 2019	**Isolating tailbay and improving forebay of the hydro plant during winter recharge** • Design Completion – Sept 2018 • Start Construction – Oct 2018 • Complete in canal work – Dec 2018 • Tailrace Building – Oct/Nov 2019
AFRD2	MP 29 Recharge Site	Construction	Active	$640,000	Mar 2019	**Construction of new site** • Survey data - Feb 2018 • Design & Contractor hired – July/Aug 2019 • GW Quality Monitoring Plan & Wells – Summer/Fall 2019 • Start construction – Oct 2019 • In canal construction complete – Nov 2019
North Side CC	Hydro Plants (4) Improvements for Winter By-pass	Design / Construction	Close Out	$5,074,581	**Complete** April 2019	**Winter recharge by-pass of the hydro plants between the Milner Pool and Wilson Lake** • Phase I const. complete – Mar 2018 • FERC approval for const. – Apr 2018 • Construction started – Aug 2018 • Final cost $3.49 M
North Side CC	Wilson Canyon Site	Design / Construction	Active	$1,900,000	Fall 2019	**Design & construction of recharge site** • Design completed & Bid advertisement – Sept 2018 • BLM ROW & constr. outside the canal – Mar 2019 • GW Quality Plan complete – Summer 2019 • Completion of monitor wells – June/July 2019 • Final Testing of infrastructure – Fall 2019

Table 3. Current IWRB ESPA Managed Recharge Projects - Upper Valley						
IWRB Partner	**Project Name**	**Project Type**	**Status**	**Approved Funds**	**Scheduled Completion**	**Description /** Key Items
Fremont-Madison ID	Egin Lakes Phase II	Construction	Active	$580,000	Fall 2019	**Construction of Egin Lakes Phase II - recharge capacity expansion** • BLM approval – Oct 2018 • Finish construction on new areas – May 2019 • Testing of Site - Summer/Fall 2019
Great Feeder Canal Co.	Ward Site	Construction	Active	$120,000	Spring/Summer 2019	**Construction of recharge site** • Evaluation of area complete – Jan 2018 • Finish of site construction – Apr 2019 • Submit GW monitoring plan – Apr 2019 (est. completion Sept 2019) • Drilling & equipping monitor well – Fall 2019
Butte Market Lake Co.	Injection Well Test	Testing / Construction	Active	$110,000	??	**Development of injection well** • Project on hold as BMLCC determines if they want to move the project forward.

Table 4. Projected Lower & Upper Valley - IWRB ESPA Managed Recharge Projects						
IWRB Partner	**Project Name**	**Project Type**	**Status**	**Approved Funds**	**Scheduled Completion**	**Description /** Key Items
North Side CC	Additional Managed Recharge Sites below Wilson Lake	Survey, Design	Planning	None at this time	2020	**Preliminary Design of potential recharge site** • Staff Evaluation and additional survey data – Summer 2018 • LiDAR Survey Data – Nov 2018 • Analysis of survey – Mar 2019 • IWRB feedback on potential sites – Apr 2019 • Design and Cost Estimate – After test of Wilson Canyon
Twin Falls CC	Recharge Wells	Evaluation	Planning	None at this time	2020	**Proposed installation of 2 managed recharge wells** • BOR WaterSmart grant including A&B ID recharge wells for total of $250,000 – Summer 2019 • Proposal to IWRB for $178,000 – Aug 2019 • Present to IWRB for consideration – Sept 2019
A & B ID	Recharge Wells	Evaluation	Planning	None at this time	2021	**Proposed installation of 4 managed recharge wells** • BOR WaterSmart grant including TFCC recharge wells for total of $250,000 – Summer 2019 • Proposal to IWRB for $202,000 – Aug 2019 • Present to IWRB for consideration – Sept 2019
	Upper Valley – Large Scale Recharge Project	Evaluation	Planning	None at this time	2020?	**Evaluation of the Upper Valley to determine the potential of developing a large scale managed recharge project** • Ranking of best areas – Spring 2019 • Field evaluation of potential areas – Summer 2019 • Analysis of available data & report of potential areas – Aug/Sept 2019 • IWRB/Aquifer Stabilization Committee input on potential sites – Nov 2019

Memorandum

To: Idaho Water Resource Board

From: Wesley Hipke

Date: September 5, 2019

Re: Twin Falls CC and A&B ID Mid-Snake Recharge Injection Wells Project

REQUIRED ACTION: Action required at the September 20, 2019 IWRB meeting. Two resolutions are provided for IWRB consideration.

Two resolutions for the funding of a project intended to improve recharge capacity on the Eastern Snake Plain Aquifer (ESPA) are attached for the IWRB to consider at the September 20, 2019 meeting.

I. Background

Twin Falls Canal Company (TFCC) and A&B Irrigation District (ABID) submitted a proposal to the IWRB for partial funding of the Mid-Snake Recharge Injection Wells Project (Project). The Project consists of installation of six deep injection wells to recharge the Eastern Snake Plain Aquifer with Snake River water during the non-irrigation and irrigation seasons. The total project cost is estimated to be $630,000. The Bureau of Reclamation (BOR) approved a $250,000 WaterSMART grant for the Project. Therefore, TFCC and ABID are requesting funding from the IWRB in the amount of $380,000 for the remainder of the project costs.

II. Project Summary

The following is a summary of general project information.

	Project	ABID	TFCC
No. of Recharge Wells:	6	4	2
5-yr Retention:		54%	44%
Depth to Water		250 ft	380 ft
Est. Recharge Capacity:	54-72 cfs	24-32 cfs	30-40 cfs
Potential use all year:		No	Yes
Project Cost:			
Construction: Material, Personnel, & Equipment	$88,973	$60,577	$28,396
Delivery Infrastructure	$75,965	$44,915	$31,050
Well Drilling	$418,958	$208,472	$210,486
Permitting	$46,104	$23,052	$23,052
TOTAL	**$630,000**	**$337,016**	**$292,984**
BOR WaterSMART Grant	**$250,000**	**$135,016**	**$114,984**
Requested IWRB Funds	**$380,000**	**$202,000**	**$178,000**
Est. Recharge (af)		**4,100**	**10,400**
IWRB Recharge Cost per Acre-foot		**$8**	**$8**

A&B Irr. Dist. / Twin Falls Canal Company
Mid-Snake Recharge Injection Wells Project

To: **Idaho Water Resource Board**

From: **Dan Temple, A&B Manager**
Brian Olmstead, TFCC Manager
Date: **August 13, 2019**

Executive Summary:

A&B and TFCC are joining to implement the Mid-Snake Recharge Injection Wells Project. The project consists of the construction of six (6) deep injection wells to recharge the Eastern Snake Plain Aquifer (ESPA) with available surface water from the Snake River. Four wells would be drilled adjacent to A&B's existing pipeline that extends off its Pumping Plant #2. **Ex. A**. Two (2) wells would be drilled off of TFCC's Main Canal near Milner Dam. **Ex. B**. The wells would be connected to the conveyance systems by pipelines. The wells are all "off canal" sites that can be used to recharge both during the irrigation and non-irrigation seasons (as conditions permit).

The ESPA was recently designated as a groundwater management area by the Idaho Department of Water Resources (IDWR). Recharging the ESPA will improve ground water supplies and hydraulically connected springs and reach gains to the Snake River, thus helping improve water supplies in subsequent drought years. The applicants seek to implement recharge at the wells as part of the Board's annual recharge program. The recharge program has a goal of 250,000 acre-feet annually and the increased capacity made available through this project will assist in meeting that goal and protecting against drought, both for groundwater and surface water users. Notably, recharge in these areas will enhance ground water supplies in a part of the ESPA that is difficult to recharge and will directly benefit area water users within A&B, Magic Valley & North Snake Ground Water Districts, and Southwest Irrigation District. Further, improved aquifer levels will benefit reach gains in the American Falls reach specifically fill Reclamation's American Falls Reservoir, which is a critical storage reservoir on the Snake River for irrigation purposes. Increasing reliability of fill of this reservoir will benefit the entire Upper Snake Reservoir System and help enhance water availability for spaceholders in Reclamation's Minidoka and Palisades Projects as well.

Project Budget: $630,000 (of which Reclamation has awarded $250,000 in a grant)
Requested IWRB Funds: $380,000 (project budget attached as **Ex. C**)
- $202,000 (60% of total approximate A&B project costs)
- $178,000 (60% of total approximate TFCC project costs)

Approximate Length: 24 Months

Completion Date: Begin Fall 2019 complete Summer/Fall 2021

Estimated Recharge: 14,800 acre-feet (30-40 cfs capacity at each site)

The project was supported by IWRB, Magic Valley GWD, Southwest Irr. Dist., and Idaho's Congressional delegation. *See* **Ex. D**

Project Limitations / Hurdles:

Similar to other recharge projects, the ability to conduct recharge at the wells will be primarily limited by available water supply and weather conditions. It is expected that the A&B wells would be able to be utilized during the fall, early spring, and early summer timeframes. Winter freezing conditions would likely prohibit use of the pipeline at times during late November-early February. It is expected that the TFCC wells would be available for use during the entire winter and during the irrigation season when TFCC has capacity in the Main Canal (except for extreme freezing conditions or scheduled maintenance on the canal).

A&B is currently proceeding with title transfer of its transferred works (including Pumping Plant #2) with the U.S. Bureau of Reclamation. It is expected this process will be completed during the summer of 2020. Even if title transfer is not completed A&B is exploring options with Reclamation regarding its ability to deliver water to the wells for recharge purposes.

Estimated Well Capacities:

A&B	6-8 cfs per well (up to 30 cfs total)
TFCC	15-20 cfs per well (up to 40 cfs total)

Estimated Project Timeline:

Fall 2019 – Winter 2020

- Begin NEPA with Reclamation (6 months)
- Order all pipe, flow meters and materials for connecting from the 30" mainline to recharge wells and from the TFCC main canal to the recharge wells.
- Begin drilling of the two wells on TFCC project.
- Manufacture all pipeline connection fittings.

Summer 2020

- Finish drilling two wells on TFCC project if not completed.
- Move well driller to A&B to begin drilling of the four 12" recharge wells.

Fall 2020 – Winter 2021

- Begin trenching and installing 12" PVC pipelines from 30" mainline to recharge well locations.
- Begin trenching and installing two (2) 20" PVC pipelines from TFCC main canal to recharge well locations.
- Make connections of the 12" lines to the 30" mainline and at injections wells.
- Make connections of the two (2) 20" PVC pipelines to the TFCC main canal and recharge wells.

Summer – Fall 2021

- Project would be complete and ready to recharge.

Exhibit
A

Project Location

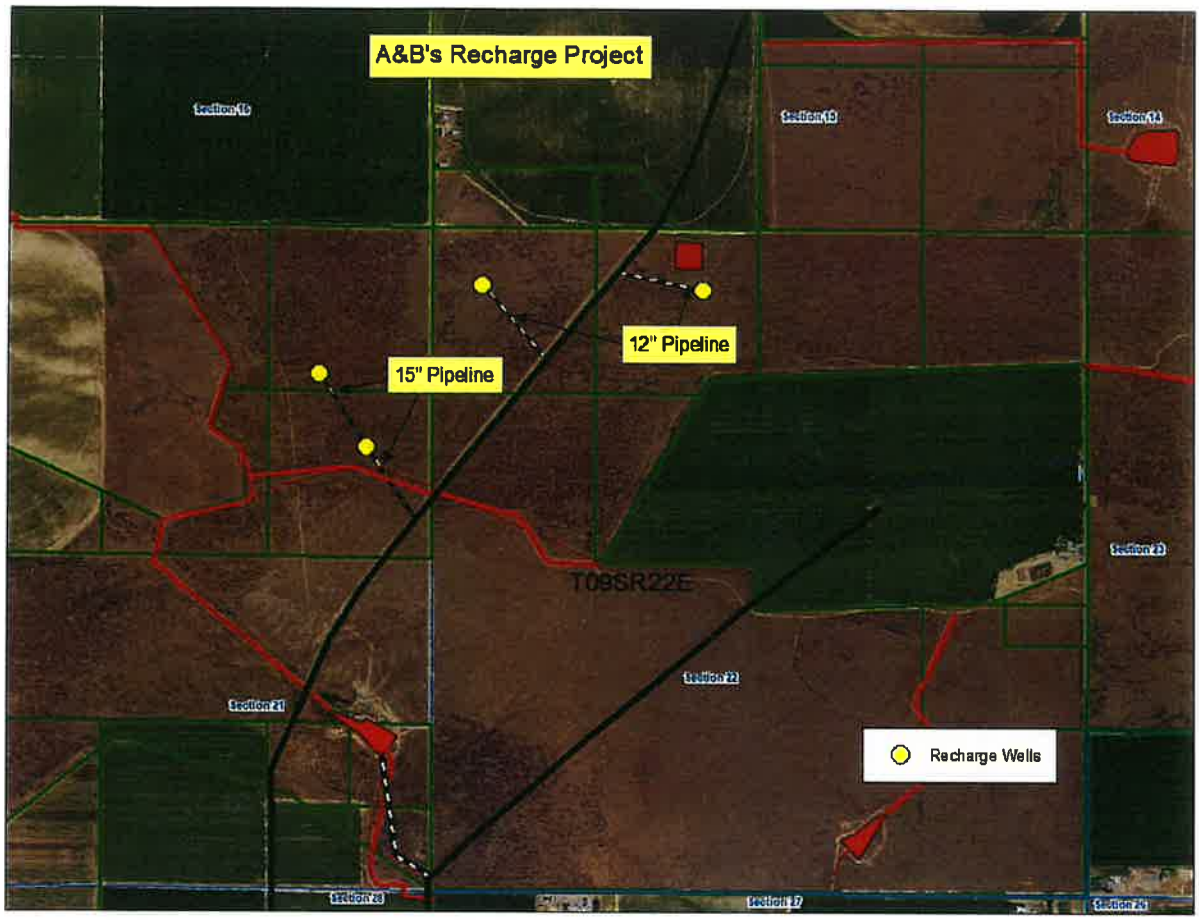
Provide detailed information on the proposed project location or project area including a map showing the specific geographic location. For example, {project name} is located in {state and

The A&B Irrigation District portion of the Mid-Snake Recharge Injection Wells Project is located approximately 4 ½ miles west and 2 ½ miles north of the City of Paul in Minidoka County, Idaho. The latitude is 43°37'30.98"N and the longitude is 113°52'20.47"W.

The Twin Falls Canal Company portion of the Mid-Snake Recharge Injection Wells Project is located approximately 6 miles northeast of the City of Murtaugh in Twin Falls County, Idaho. The latitude is 42°31'17.06"N and the longitude is 114°02'57.35"W.

Fig. 4: Google Earth Image of the Project Locations Relative to Milner Dam on Snake River.

Figure 5: Recharge Injection Wells on A&B Project



Recharge Wells on TFCC Project

As for the portion of the project on the Twin Falls Canal Company, TFCC will be building all-weather access roads, clearing, grading and preparing the site, and installing two new headgates into the TFCC main canal to supply water to the pipelines to the two large injection wells. TFCC crews will also be trenching, installing and backfilling approximately 300 ft of 20" 100 psi underground pipe from the two headgates to the two (2) 20" injection wells. The drilling of the recharge wells would be contracted out to a licensed well driller. The rest of the in-kind services will be surveying, project inspection, bookkeeping. TFCC crews will assist with the well drilling, welding, and flow meter installation as needed.

Recharge at this site of the project would typically occur from early November through late spring (likely May and June some years).

Exhibit
B

Figure 6: Recharge Injection Wells on TFCC Project

Exhibit
C

	A	B	C	D	E
1	**Mid-Snake Recharge Injection Wells Project**				
2	**Appendix C**				
3					**Total**
4	**Budget Item Description**	**Quantity**	**Units**	**Unit Cost**	**Cost**
5	**Salaries and Wages**				
6	Dan Temple - Project Manager	10	HR	$45.68	
7	Diana Warburton - Project Assistant	20	HR	$38.67	
8	Kent Tarbet- Project Foreman	320	HR	$27.57	
9	Equipment Operator	340	HR	$20.80	
10	Construction Crew	1072	HR	$20.38	
11					
12					
13	**Fringe Benefits**				
14	Dan Temple - Project Manager	10	HR	$12.89	
15	Diana Warburton - Project Assistant	20	HR	$11.78	
16	Kent Tarbet- Project Foreman	320	HR	$9.92	
17	Equipment Operator	340	HR	$9.04	
18	Construction Crew	1072	HR	$8.73	
19					
20					
21	**Equipment Operating Hours**				**$5,634**
22	Excavator	80	HR	$59.36	$4,749
23	Backhoe	20	HR	$44.24	$885
24					
25	**Construction & Construction Management**				**$54,943**
26	Dan Temple - Project Manager	10	HR	$58.57	$586
27	Diana Warburton - Project Assistant	20	HR	$50.45	$1,009
28	Kent Tarbet- Project Foreman	320	HR	$37.49	$11,997
29	Equipment Operator #1	320	HR	$29.84	$9,549
30	Equipment Operator #2	20	HR	$29.84	$597
31	Construction Crew #1	320	HR	$29.11	$9,315
32	Construction Crew #2	384	HR	$29.11	$11,178
33	Construction Crew #3	368	HR	$29.11	$10,712
34					
35	**Supplies/Materials**				
36					
37	***Drilling Costs***				***$418,958***
38	Drilling of A&B 12" Recharge Wells	4	EA	$52,118.00	$208,472
39	Drilling of TFCC 20" Recharge Wells	2	EA	$105,243.00	$210,486
40					
41					
42					
43	***Transitions and Piping Components***				***$75,965***
44	***A&B Irrigation District***				
45	15" 80 PSI PVC Pipe	1400	FT	$8.50	$11,900
46	12" 80 PSI PVC pipe	1,400	FT	$5.00	$7,000
47	30" pipe repair coupling	6	EA	$1,600.00	$9,600
48	Pressure relief valves	4	EA	$1,350.00	$5,400

	A	B	C	D	E
49	Air vents and saddles	4	EA	$300.00	$1,200
50	12" Flow meters	4	EA	$1,600.00	$6,400
51	12" - 45°Elbow	4	EA	$60.00	$240
52	12" - 90° Elbow	4	EA	$90.00	$360
53	12" Weld on Starter	4	EA	$78.75	$315
54	12" Steel Pipe	100	FT	$25.00	$2,500
55					$44,915
56					
57	***Twin Falls Canal Co.***				
58	**Salaries and Wages**				
59	Kevan Birrell - Crew	48	HR	$19.76	
60	Victor Chavez - Crew	48	HR	$19.96	
61	Aaron Christensen - Crew	48	HR	$16.71	
62	Dave Crawford - Equipment Operator	60	HR	$24.73	
63	Brandon Gentert - Crew	48	HR	$20.60	
64	Eddy Griggs - Equipment Operator	60	HR	$25.95	
65	Brian Olmstead - Project Manager	16	HR	$48.47	
66	Kimberly Rankin -Project Administrator	5	HR	$23.15	
67	Clay Robinson - Project Foreman	60	HR	$36.34	
68	Kim Walters - - Equipment Operator	60	HR	$24.21	
69	Louis Zamora - Project Assistant	60	HR	$31.92	
70					
71					
72	**Fringe Benefits**				
73	Kevan Birrell - Crew	48	HR	$10.73	
74	Victor Chavez - Crew	48	HR	$10.84	
75	Aaron Christensen - Crew	48	HR	$9.08	
76	Dave Crawford - Equipment Operator	60	HR	$13.43	
77	Brandon Gentert - Crew	48	HR	$11.19	
78	Eddy Griggs - Equipment Operator	60	HR	$14.10	
79	Brian Olmstead - Project Manager	16	HR	$26.33	
80	Kimberly Rankin -Project Administrator	5	HR	$12.58	
81	Clay Robinson - Project Foreman	60	HR	$19.74	
82	Kim Walters - - Equipment Operator	60	HR	$13.15	
83	Louis Zamora - Project Assistant	60	HR	$17.34	
84					
85					
86	**Materials & Equipment**				
87	Pit Run Gravel	300	EA	$5.00	$1,500
88	Concrete	10	EA	$150.00	$1,500
89	Headgate	2	EA	$2,000.00	$4,000
90	PVC Pipe	300	EA	$20.00	$6,000
91	20" Ultrasonic Flow Meters	2	EA	$8,000.00	$16,000
92	Steel pipe 1/4" wall X 20"	60	FT	$30.00	$1,800
93	4" Air vents	2	EA	$125.00	$250
94					$31,050
95					
96	**Equipment Operating Hours**				**$8,060**

	A	B	C	D	E
97	Dump Truck (Kevan Birrell)	24	HR	$42.25	$1,014
98	Dump Truck (Victor Chavez)	24	HR	$42.25	$1,014
99	Loader (Dave Crawford)	24	HR	$87.25	$2,094
100	Trackhoe (Eddy Griggs)	30	HR	$87.25	$2,618
101	Pickup (Clay Robinson)	30	HR	$5.60	$168
102	Grader (Kim Walters)	16	HR	$72.00	$1,520
103					
104	**Construction & Construction Management**				**$20,336**
105	Kevan Birrell - Crew	48	HR	$30.49	$1,464
106	Victor Chavez - Crew	48	HR	$30.80	$1,478
107	Aaron Christensen - Crew	48	HR	$25.79	$1,238
108	Dave Crawford - Equipment Operator	60	HR	$38.16	$2,290
109	Brandon Gentert - Crew	48	HR	$31.79	$1,526
110	Eddy Griggs - Equipment Operator	60	HR	$40.05	$2,403
111	Brian Olmstead - Project Manager	16	HR	$74.80	$1,170
112	Kimberly Rankin -Project Administrator	5	HR	$35.73	$179
113	Clay Robinson - Project Foreman	60	HR	$56.08	$3,365
114	Kim Walters - - Equipment Operator	60	HR	$37.36	$2,242
115	Louis Zamora - Project Assistant	60	HR	$49.26	$2,956
116					
117	***Total Construction Cost***				**$583,896**
118					
119	**Other**				**$46,104**
120	***Environmental and Regulatory Compliance Costs***				
121	NEPA Environmental Assessment				$45,000
122	Contingencies				$1,106
123					
124	**Total Project Costs**				**$630,000**

Exhibit
D

Mike Crapo
United States Senator
239 Dirksen Senate Office Building
Washington, D.C. 20510

James E. Risch
United States Senator
483 Russell Senate Office Building
Washington, D.C. 20510

Mike Simpson
Member of Congress
2084 Rayburn House Office Building
Washington, D.C. 20515

May 8, 2019

Brenda Burman, Commissioner
Bureau of Reclamation
U.S. Department of the Interior
1849 C Street, NW, MIB 7600
Washington, DC 20240-001

RE: Letter of Support – A&B Irrigation District & Twin Falls Canal Company Mid-Snake Recharge Injection Wells Project Application (BOR-DO-19-F003)

Dear Commissioner Burman:

We are writing to express our support for the A&B Irrigation District ("A&B") and Twin Falls Canal Company ("TFCC") application for a WaterSMART Drought Resiliency program grant to assist with the Mid-Snake Recharge Injection Wells project. A&B and TFCC provide water to nearly 300,000 acres in southern Idaho and rely upon water from Reclamation projects.

Recharging the Eastern Snake Plain Aquifer (ESPA) is a critical water supply tool that will help water users protect against drought conditions across southern Idaho. Recharging during flood control periods will improve natural flow availability and preserve storage supplies for use during dry years. The project will assist with the Idaho Water Resource Board's ongoing recharge program and will enhance available infrastructure capacity to replenish ground water supplies relied upon by farmers, industries, and cities throughout the region.

The project will also help stabilize and enhance tributary spring flows and reach gains to the Snake River. Greater reach gains in the American Falls reach will directly benefit Reclamation's storage facilities, notably American Falls Reservoir. Finally, recharge that improves spring flows in the Mid-Snake and Thousand Springs area stands to benefit ESA-listed snail species and will also likely assist in water quality issues.

Because of the benefits this project will provide, we wish to offer our full support of the grant application filed by A&B and TFCC.

Sincerely,

Mike Crapo
United States Senator

James E. Risch
United States Senator

Mike Simpson
United States Congressman

cc. Governor Brad Little
Lorri Gray

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March 25, 2019

U.S. Bureau of Reclamation
WaterSMART Program
Denver, Colorado 80225

RE: Letter of Support – A&B Irrigation District & Twin Falls Canal Company Mid-Snake Recharge Injection Wells Project Application

Dear U.S. Bureau of Reclamation:

Please accept this letter of support for the A&B Irrigation District & Twin Falls Canal Company application for a WaterSMART Drought Resiliency program grant to assist with the Mid-Snake Recharge Injection Wells project. The Idaho Water Resource Board (Board) is charged with many water resource policy, planning, and project development functions on behalf of the State of Idaho, including managing an effort to stabilize and recover the Eastern Snake Plain Aquifer (ESPA).

The A&B Irrigation District (A&B) was created to operate and maintain the North Side Pumping Division of Reclamation's Minidoka Project. A&B relies upon both surface water from the Snake River and groundwater from the ESPA to deliver irrigation water to approximately 82,000 acres in Jerome and Minidoka Counties. A&B holds storage space in Reclamation's American Falls and Palisades Reservoirs.

The Twin Falls Canal Company (TFCC) is a Carey Act company organized for non-profit purposes under Idaho law. TFCC relies upon natural flow from the Snake River and storage in Reclamation's American Falls and Jackson Lake Reservoir. TFCC delivers irrigation water to approximately 200,000 acres in Twin Falls County. Importantly, TFCC relies upon reach gains to the Snake River in the Blackfoot to Minidoka reach that flow directly from the ESPA.

Between 1912 and 1952, 17 million acre-feet of water were added to storage in the ESPA, primarily through the construction and operated of unlined canal systems over the ESPA, resulting in leakage that enhanced the aquifer. Since 1952 several changes have taken place that has resulted in declining storage in the aquifer. Twelve (12) million acre-feet have been lost from aquifer storage since 1952. These factors include canal systems and irrigators becoming more efficient in their delivery and application of water thereby reducing

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seepage into the aquifer, the development of ground water pumping for irrigation, drought events, and long-term climate change.

This decrease in aquifer storage resulted in declining ground water levels in the ESPA, and declining spring flows from the ESPA, resulting in numerous water use conflicts that had the potential to disrupt the economy of the area. The declining ground water levels have also reduced available water supplies for ground and surface water users on Reclamation's projects. Both A&B and TFCC have been involved in water delivery calls and litigation resulting from these conflicts.

The Board embarked on several programs to address water supply issues in the ESPA, including the development of the Comprehensive Aquifer Management Plan (CAMP). More recently, surface and ground water users entered in a Settlement Agreement in 2015 aimed at restoring the ESPA to enhance water supplies for future years. The State of Idaho committed to support this agreement and its prior aquifer management plan through a comprehensive recharge program with a goal of 250,000 acre-feet pear year. The Board has implemented an aggressive campaign to increase recharge capacity across the plain through the Legislature's appropriations of over $20 million for capital improvement project. Notably, the Board has recharged over 908,000 acre-feet in the last three years (66,000 in 2016; 317,000 in 2017; and 525,000 in 2018).

The proposed Mid-Snake Recharge Injection Wells Project has numerous benefits to the Board the State. The project will add recharge capacity and help the Board work toward reaching the state's managed recharge goals. The direct injection of recharge water in the areas identified will provide long-term benefits to the aquifer, helping stabilize groundwater levels in the ESPA, which was designated as a Groundwater Management Area by the Director of IDWR in 2016. The project is uniquely located in an area where surface water is typically available to the Board to recharge throughout the entire non-irrigation season. The project will further assist in protecting waterusers, including A&B and TFCC, in years of drought by recharging surplus surface water from the Snake River. Enhancing ground water supplies and levels will help ensure the water is available for use in subsequent drought years.

The project will help stabilize aquifer levels in the ESPA and tributary spring flows and reach gains to the Snake River. Greater reach gains in the American Falls reach will directly benefit storage in Reclamation's American Falls Reservoir, another asset to protect against drought. Finally, recharge that improves spring flows in the Mid-Snake and Thousand Springs area stands to benefit ESA-listed snail species and will also likely assist in water quality issues.

Because of the benefits this project will provide, the Board wishes to offer its full support of the grant application filed by A&B and TFCC.

Please feel free to contact me with any questions.

Sincerely,

Brian Patton, P.E.
Executive Officer, Idaho Water Resource Board

Magic Valley Ground Water District
P.O. Box 430
Paul, ID 83347
(208) 339-6461

March 21, 2019

U.S. Bureau of Reclamation
WaterSMART Program
Denver, Colorado 80225

Re: Letter of Support for Mid-Snake Recharge Injection Wells Project Grant Application (Drought Response Program Grant FY 2019)

Dear U.S.B.R.:

I am chairman of the Magic Valley Ground Water District that represents private groundwater users that irrigate over 130,000 acres in Jerome, Lincoln, Cassia, Blaine and Minidoka Counties in southern Idaho. Our district represents numerous members in the area close to the proposed recharge injection wells on the A&B Irrigation District project. Improved ground water supplies and levels in this area will benefit our members in drought conditions. Recharging available surface water for use in subsequent drought years is wise water policy and a benefit to all of southern Idaho.

Please accept this letter of support for the A&B Irrigation District's and Twin Falls Canal Company's WaterSMART grant application to assist with the Mid Snake Recharge Injection Wells Project. As a local landowner and farmer in Minidoka County, the proposed project will benefit A&B and the Magic Valley Groundwater District irrigators.

I am in full support of the proposed project and the grant would certainly assist the applicants in completing this important project.

Sincerely

MAGIC VALLEY GROUND WATER DISTRICT

Dean Stevenson

Dean Stevenson, Chairman

March 21, 2019

U.S. Bureau of Reclamation
WaterSMART Program
Denver, Colorado 80225

Re: Letter of Support for Mid-Snake Recharge Injection Wells Project Grant Application (Drought Response Program Grant FY 2019)

Dear U.S.B.R.:

I am chairman of the Southwest Irrigation District that represents private groundwater users that irrigate over 100,000 acres in Twin Falls and Cassia Counties in southern Idaho. Our district represents numerous members in the area south and east of the proposed recharge injection wells on the Twin Falls Canal Company project. Improved ground water supplies and levels in this area will benefit our members in drought conditions. Recharging available surface water for use in subsequent drought years is wise water policy and a benefit to all of southern Idaho.

Please accept this letter of support for the A&B Irrigation District's and Twin Falls Canal Company's WaterSMART grant application to assist with the Mid Snake Recharge Injection Wells Project. As a local landowner and farmer in Twin Falls County, the proposed project will benefit TFCC's and Southwest Irrigation District's members.

I am in full support of the proposed project and the grant would certainly assist the applicants in completing this important project.

Sincerely

SOUTHWEST IRRIGATION DISTRICT

Randy Brown

Randy Brown, Chairman