

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT
To appropriate the public waters of the State of Idaho

Ident. No. 35-14402

1. Name of applicant (s) Karl T. or Jeffrey M. Cook Phone (208) 356-5214 / 351-1055
 Name connector (check one): ☐ and ☒ or ☐ and/or
 Mailing address 703 West 7th South City Rexburg
 State Idaho Zip 83440 Email _____
 c/o Keith C. Wilson Rocky Mountain Environmental Associates, Inc. Email kwilson@rockymountainenvironmental.com
 482 Constitution Way, Ste 303, Idaho Falls ID 83402 (208) 524-2353 Fax (208) 524-1795

2. Source of water supply Ground water which is a tributary of _____

3. Location of point of diversion:

TWP	RGE	SEC	Govt Lot	¼	¼	¼	County	Source	Local Name or tag #
4N	35E	17		SE	SE	NW	Jefferson	Ground water	

4. Water will be used for the following purposes:

Amount 5.00 cfs for Irrigation purposes from 04/01 to 10/31 (both dates inclusive)
 (cfs or acre-feet per year)

Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
 (cfs or acre-feet per year)

Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
 (cfs or acre-feet per year)

5. Total quantity to be appropriated is (a) 5.00 cubic feet per second (cfs) and/or (b) _____ Acre-feet per year (af)

6. Proposed diverting works:

a. Describe type and size of devices used to divert water from the source Existing Well to center pivots & laterals with sprinklers

b. Height of storage dam _____ feet; active reservoir capacity _____ acre-feet; total reservoir capacity _____ acre-feet. If the reservoir will be filled more than once each year, describe the refill plan in item 11. For dams 10 feet or more in height OR reservoirs with a total storage capacity of 50 acre-feet or more, submit a separate

Application for Construction or Enlargement of a New or Existing Dam. Application required? ☐ Yes ☒ No

c. Proposed well diameter is 20 inches; proposed depth of well is 675 feet. (EXISTING)

d. Is ground water with a temperature of greater than 85°F being sought? ☐ Yes ☒ No

e. If well is already drilled, when? 05/18/1976; drilling firm Inter Mountain Drilling
 well was drilled for (well owner) Frank & Dave Jones; Drilling Permit No. _____

7. Description of proposed uses (if irrigation only, go to item 8):

a. Hydropower; show total feet of head and proposed capacity in kW. _____

b. Stockwatering; list number and kind of livestock. _____

c. Municipal; complete and attach the Municipal Water Right Application Checklist

d. Domestic; show number of households. _____

e. Other; describe fully. _____



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DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT
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Ident. No. 35-14402 / 79561

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 Name connector (check one): ☐ and ☒ or ☐ and/or
 Mailing address 703 West 7th South City Rexburg
 State Idaho Zip 83440 Email _____
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4N	35E	17		SE	SE	NW	Jefferson	Ground water	

RECEIVED

AUG 29 2014

Department of Water Resources
Eastern Region

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Amount 5.00 cfs for Irrigation purposes from 04/01 to 10/31 (both dates inclusive)
 (cfs or acre-feet per year)
 Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
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35-14402

8. Description of place of use:

- a. If water is for irrigation, indicate acreage in each subdivision in the tabulation below.
b. If water is used for other purposes, place a symbol of the use (*example: D for Domestic*) in the corresponding place of use below. See instructions for standard symbols.

TWP	RGE	Sec	NE ¼				NW ¼				SW ¼				SE ¼				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
4N	35E	17	32	35	38	33	33	34	39	38	37	40	33	32	32	38	34	32	560

Total Number of acres to be irrigated 560

9. Describe any other water rights used for the same purposes as described above. Include water delivered by a municipality, canal company, or irrigation district. If this application is for domestic purposes, do you intend to use this water, water from another source, or both, to irrigate your lawn, garden, and/or landscaping?

35-7280, 35-7281, 35-13241, 35-14334, 35-14335 & 35-14336

10. a. Who owns the property at the point of diversion? Applicants

- b. Who owns the land to be irrigated or place of use? Applicants

- c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing:

11. Describe your proposal in narrative form, and provide additional explanation for any of the items above. Attach additional pages if necessary.

This application proposes to increase the diversion rate of the point of diversion for water rights 35-7280, 35-7281, 35-13241, 35-14334, 35-14335 & 35-14336, with NO INCREASE in the decreed Diversion Volume so that the period of irrigation can be shortened to accommodate crops. SEE ATTACHED CALCULATIONS

12. Time required for completion of works and application of water to proposed beneficial use is 3 years (minimum 1 year)

13. MAP OF PROPOSED PROJECT REQUIRED - Attach an 8½"x11" map clearly identifying the proposed point of diversion, place of use, section #, township & range. A photocopy of a USGS 7.5 minute topographic quadrangle map is preferred.

The information contained in this application is true to the best of my knowledge. I understand that any willful misrepresentations made in this application may result in rejection of the application or cancellation of an approval.

[Signature]
Signature of Applicant

Signature of Applicant

Jeffrey Cook
Print Name (and title, if applicable)

Print Name (and title, if applicable)

Received by Se Date 8/29/14 Time _____

For Department Use:

Preliminary check by _____

Fee \$ 410- Receipted by Se

Receipt No. E040207

Date 8/29/14

35-14402

WATER RIGHTS

Jeffery Cook	Diversion Rate (cfs)	Volume AFA	Acre Limit	PPU Acres
35-7280	3.13 cfs	626.7 afa	156.7 acres	418.0 acres
35-7281	3.73 cfs	836.0 afa	209.0 acres	418.0 acres
35-13241	0.86 cfs	209.2 afa	52.3 acres	418.0 acres
Sum =	7.72 cfs	1671.9 afa	418.0 acres	418.0 acres
LIMITED TO:	3.83 cfs	1633.3 afa	418.0 acres	418.0 acres

WATER RIGHTS

Karl Cook	Diversion Rate (cfs)	Volume AFA	Acre Limit	PPU Acres
35-14334	1.07 cfs	213.2 afa	53.3 acres	142.0 acres
35-14335	1.27 cfs	284.0 afa	71.0 acres	142.0 acres
35-14336	0.29 cfs	70.8 afa	17.7 acres	142.0 acres
Sum =	2.63 cfs	568.0 afa	142.0 acres	142.0 acres
LIMITED TO:	1.30 cfs	554.4 afa	142.0 acres	142.0 acres

Combined Water Rights

Jeffery Cook	3.83 cfs	1633.3 afa	418.0 acres
Karl Cook	1.30 cfs	554.4 afa	142.0 acres
Combined =	5.13 cfs	2187.7 afa	560.0 acres
Calculate # days to produce 2187.7 afa			
	5.13 cfs	2187.7 afa	560 ac

$$\text{Volume} = \text{ac-ft} = (\text{cfs})(1.9835)(\# \text{ days})$$

$$\# \text{ Days} = (\text{ac-ft}) \div (\text{cfs} \times 1.9835) = 2187.7 \div [5.13 \text{ cfs} \times 1.9835] =$$

$$\text{Days} = (2187.7) \div (10.1754) = 214.99987 \text{ days}$$

April 1	Oct 31	# days	# weeks	≈ Weeks	Weeks Remaining
90	304	214	30.57	30.6 Weeks	
= 4 weeks x 7 =		28	Harvest Days off =	4.0 Weeks	
		186.0 days	or	26.6 Weeks	- 1.3 wks = 25.3
One day off every 3 weeks		-8.9 days	=	(26.4 wk) + (3 wk/1day) =	8.867 days
		177.1 days	=	8.9 days =	1.271 weeks

Power Company Savings = 12 hr/wk

$$25.3 = 26.6 \text{ wk} - 1.3 \text{ wk}$$

$$(12 \text{ hr/wk}) \times (25.3 \text{ wk}) = 303.6 \text{ hours} = 12.65 \text{ days}$$

$$-12.7 \text{ days}$$

$$= 12.7 \text{ days}$$

$$\text{@ 24 hours/day/set} = 164.4 \text{ Approximate remaining 24 hour days}$$

$$\text{@ 16 hours/day/sets} = 2630.4 \text{ hours} = 109.6 \text{ days} = 110 \text{ days}$$

The Number of Days of Irrigation may range from 110 days to 164.4 days

$$\text{Diversion Volume} = (\text{cfs})(1.9835)(\# \text{ days}) = \text{afa}$$

$$\text{Vol} = 5.13 \times 1.9835 \times 214 = 2177.53 \text{ afa}$$

$$\text{CFS}^{110 \text{ days}} = (\text{Volume}) \div (1.9835 \times \text{days}) =$$

$$2177.5 \div (1.9835 \times 110 \text{ days}) =$$

$$2177.5 \div 218.185 = 9.98006 \text{ cfs} = \text{Diversion Rate to deliver Total Volume}$$

$$\text{CFS}^{164.4 \text{ days}} = 2177.5 \div (1.9835 \times 164.4 \text{ days}) =$$

$$2177.5 \div 326.087 = 6.67766 \text{ cfs} = \text{Diversion Rate to deliver Total Volume}$$

Maximum Remaining Diversion Rate Needed = 4.85 cfs

$$\text{cfs} = 9.98 \text{ cfs} - 5.13 = 4.85 \text{ cfs}$$

Filing Fee is the same for 4.85 cfs as for 5.00 cfs

Recommend filing for 5.00 cfs

Applicant would like to be able to irrigate with in the entire irrigation season (04/01 to 10/31) without exceeding the decreed volume. The number of days calculated for irrigation are an estimate of the actual number of days of irrigation, and the number of hours per day will vary according to the weather and the harvesting.

