

State of Idaho
Department of Water Resources
Permit to Appropriate Water

NO. 63-33768

Priority: May 01, 2013

Maximum Diversion Rate: 2.90 CFS

This is to certify, that JEROME G WANDERS
15051 KINGS ROW RD
CALDWELL ID 83607

has applied for a permit to appropriate water from:

Source: GROUND WATER

and a permit is APPROVED for development of water as follows:

BENEFICIAL USE

IRRIGATION

PERIOD OF USE

03/01 to 11/15

RATE OF DIVERSION

2.90 CFS

LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER NE1/4SE1/4 Sec. 13, Twp 03N, Rge 04W, B.M., CANYON County

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals		
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE							
03N	04W	13															39.0	39.0	31.0	36.0	145.0

Total Acres: 145

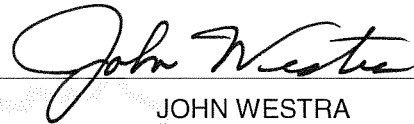
CONDITIONS OF APPROVAL

1. Proof of application of water to beneficial use shall be submitted on or before **July 01, 2018**.
2. Subject to all prior water rights.
3. Project construction shall commence within one year from the date of permit issuance and shall proceed diligently to completion unless it can be shown to the satisfaction of the Director of the Department of Water Resources that delays were due to circumstances over which the permit holder had no control.
4. The right holder shall make full beneficial use of all surface water rights available to the right holder for irrigation of the lands authorized to be irrigated under this right. The right holder shall limit the diversion of ground water under this right to those times when the surface water supply is not available or the surface water supply is not reasonably sufficient to irrigate the place of use authorized under this right.
5. If the surface water right(s) appurtenant to the place of use is abandoned, forfeited, sold, transferred, leased or used on any other place of use, this right to divert ground water shall not be used without an approved transfer pursuant to Section 42-222, Idaho Code, or approval of the Department if a transfer is not required.

State of Idaho
Department of Water Resources
Permit to Appropriate Water
NO. 63-33768

6. This right when combined with all other rights shall provide no more than 0.02 cfs per acre nor exceed a combined annual maximum diversion volume of 652.5 af at the field headgate for the place of use.
7. This right when combined with all other rights shall provide no more than 0.02 cfs per acre nor more than 4.5 afa per acre at the field headgate for irrigation of the place of use.
8. Right holder shall comply with the drilling permit requirements of Section 42-235, Idaho Code and applicable Well Construction Rules of the Department.
9. The Director retains jurisdiction to require the right holder to provide purchased or leased natural flow or stored water to offset depletion of Lower Snake River flows if needed for salmon migration purposes. The amount of water required to be released into the Snake River or a tributary, if needed for this purpose, will be determined by the Director based upon the reduction in flow caused by the use of water pursuant to this permit.

This permit is issued pursuant to the provisions of Section 42-204, Idaho Code. Witness the signature of the Director, affixed at Boise, this 25th day of June, 20 13.


JOHN WESTRA

Western Regional Manager



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way • Boise, Idaho 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Web Site: www.idwr.idaho.gov

June 26, 2013

C. L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Interim Director

JEROME G WANDERS
15051 KINGS ROW RD
CALDWELL ID 83607

RE: Permit No.63-33768

Permit Approval Notice

Dear Permit Holder:

The Department of Water Resources has issued the enclosed permit authorizing you to establish a new water right. Please be sure to thoroughly review the conditions of approval and remarks listed on your permit.

The permit is a PRELIMINARY ORDER issued by the Department pursuant to Section 67-5243, Idaho Code. It can and will become a final order without further action by the Department unless a party petitions for reconsideration or files an exception and/or brief within fourteen (14) days of the service date as described in the enclosed information sheet.

As a permit owner you must commence the excavation or construction of the diverting works within one year of the date the permit was issued, and you must proceed diligently until the project is completed. The date shown under condition no. 1 is the date when the project must be completed.

The Department will send you a 'Proof Due Notice' approximately 60 days prior to the above referenced date requesting you to file either a Proof of Beneficial Use form or a Request for Extension of Time form.

The right to drill a well is not a part of this permit to appropriate water. Beginning in July of 1987, a statute was enacted which requires a drilling permit for new well construction and deepening of existing wells. If the well(s) proposed for use under this water right permit were drilled or deepened after July 1, 1987, a separate drilling permit must be obtained from this Department. Please contact the Ground Water Protection Section located here at this office or our regional office nearest you.

Also, please note that water right owners are required to report any change of water right ownership and/or mailing address to the Department within 120 days of the change. Failure to report these changes could result in a \$100 late filing fee. Contact any office of the Department or visit the Department's homepage on the Internet to obtain the proper forms and instructions.

If you have any questions, please contact me at (208)334-2190.

Sincerely,


for:

John Westra
Western Regional Manager

Enclosures

cc: SPF WATER ENGINEERING LLC

CERTIFICATE OF SERVICE

I hereby certify that on June 26, 2013 I mailed a true and correct copy, postage prepaid, of the foregoing PRELIMINARY ORDER(Approved Permit) to the persons listed below:

RE: WATER RIGHT NO. 63-33768

**JEROME G WANDERS
15051 KINGS ROW RD
CALDWELL ID 83607**

**SPF WATER ENGINEERING LLC
C/O LORI GRAVES
300 E MALLARD DR STE 350
BOISE ID 83706**

A handwritten signature in black ink, reading "Rachel Sommer", is written over a horizontal line.

**Rachel Sommer
Administrative Assistant I**

EXPLANATORY INFORMATION TO ACCOMPANY A PRELIMINARY ORDER

(To be used in connection with actions when a hearing was not held)

(Required by Rule of Procedure 730.02)

The accompanying order or approved document is a "Preliminary Order" issued by the department pursuant to section 67-5243, Idaho Code. It can and will become a final order without further action of the Department of Water Resources ("department") unless a party petitions for reconsideration, files an exception and brief, or requests a hearing as further described below:

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a preliminary order with the department within fourteen (14) days of the service date of this order. **Note: the petition must be received by the department within this fourteen (14) day period.** The department will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See Section 67-5243(3) Idaho Code.

EXCEPTIONS AND BRIEFS

Within fourteen (14) days after: (a) the service date of a preliminary order, (b) the service date of a denial of a petition for reconsideration from this preliminary order, or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration from this preliminary order, any party may in writing support or take exceptions to any part of a preliminary order and may file briefs in support of the party's position on any issue in the proceeding with the Director. Otherwise, this preliminary order will become a final order of the agency.

REQUEST FOR HEARING

Unless a right to a hearing before the Department or the Water Resource Board is otherwise provided by statute, any person aggrieved by any final decision, determination, order or action of the Director of the Department and who has not previously been afforded an opportunity for a hearing on the matter may request a hearing pursuant to section 42-1701A(3), Idaho Code. A written petition contesting the action of the Director and requesting a hearing shall be filed within fifteen (15) days after receipt of the denial or conditional approval.

ORAL ARGUMENT

If the Director grants a petition to review the preliminary order, the Director shall allow all parties an opportunity to file briefs in support of or taking exceptions to the preliminary order and may schedule oral argument in the matter before issuing a final order. If oral arguments are to be heard, the Director will within a reasonable time period notify each party of the place, date and hour for the argument of the case. Unless the Director orders otherwise, all oral arguments will be heard in Boise, Idaho.

CERTIFICATE OF SERVICE

All exceptions, briefs, requests for oral argument and any other matters filed with the Director in connection with the preliminary order shall be served on all other parties to the proceedings in accordance with IDAPA Rules 37.01.01302 and 37.01.01303 (Rules of Procedure 302 and 303).

FINAL ORDER

The Director will issue a final order within fifty-six (56) days of receipt of the written briefs, oral argument or response to briefs, whichever is later, unless waived by the parties or for good cause shown. The Director may remand the matter for further evidentiary hearings if further factual development of the record is necessary before issuing a final order. The department will serve a copy of the final order on all parties of record.

Section 67-5246(5), Idaho Code, provides as follows:

Unless a different date is stated in a final order, the order is effective fourteen (14) days after its service date if a party has not filed a petition for reconsideration. If a party has filed a petition for reconsideration with the agency head, the final order becomes effective when:

- (a) The petition for reconsideration is disposed of; or
- (b) The petition is deemed denied because the agency head did not dispose of the petition within twenty-one (21) days.

APPEAL OF FINAL ORDER TO DISTRICT COURT

Pursuant to sections 67-5270 and 67-5272, Idaho Code, if this preliminary order becomes final, any party aggrieved by the final order or orders previously issued in this case may appeal the final order and all previously issued orders in this case to district court by filing a petition in the district court of the county in which:

- i. A hearing was held,
- ii. The final agency action was taken,
- iii. The party seeking review of the order resides, or
- iv. The real property or personal property that was the subject of the agency action is located.

The appeal must be filed within twenty-eight (28) days of this preliminary order becoming final. See section 67-5273, Idaho Code. The filing of an appeal to district court does not itself stay the effectiveness or enforcement of the order under appeal.



SPF WATER
ENGINEERING

June 19, 2013

RECEIVED

JUN 21 2013

WATER RESOURCES
WESTERN REGION

Steve Lester
Idaho Department of Water Resources
Western Region
2735 Airport Way
Boise, ID 83705-5082

Subject: Application for Permit No. 63-33768, Jerome Wanders

Dear Steve:

This letter provides a response to your May 3, 2013 request for additional information regarding the above-referenced application for permit. This application proposes diversion of up to 2.90 cfs for irrigation use on 145 acres. Ground water use will be supplemental to the primary surface water source delivered by Nampa and Meridian Irrigation District.

Water Supply

Your request asked for information showing a sustainable supply from the proposed aquifer, which could include a reasonable estimate of annual volume most likely needed based on historic patterns and projected crop requirements.

The available information indicates ground water levels in the area of proposed diversion are stable. Information from the Department's hydro.online ground water level database identified seven monitoring wells located within three-miles of the proposed point of diversion (see Figure 1). Water levels in these wells appear stable with no significant indicated long-term increasing or declining trends, indicating that additional ground water is available for appropriation in this area.

The land proposed as a place of use is located just over one-mile below Deer Flat Dam and has been irrigated for many decades. Surface water supplies have apparently been sufficient to meet irrigation requirements for most years. However, this season the applicant has planted an expensive potato crop, which has coincided with a low water supply with surface water projected to be curtailed early, potentially as early as August.

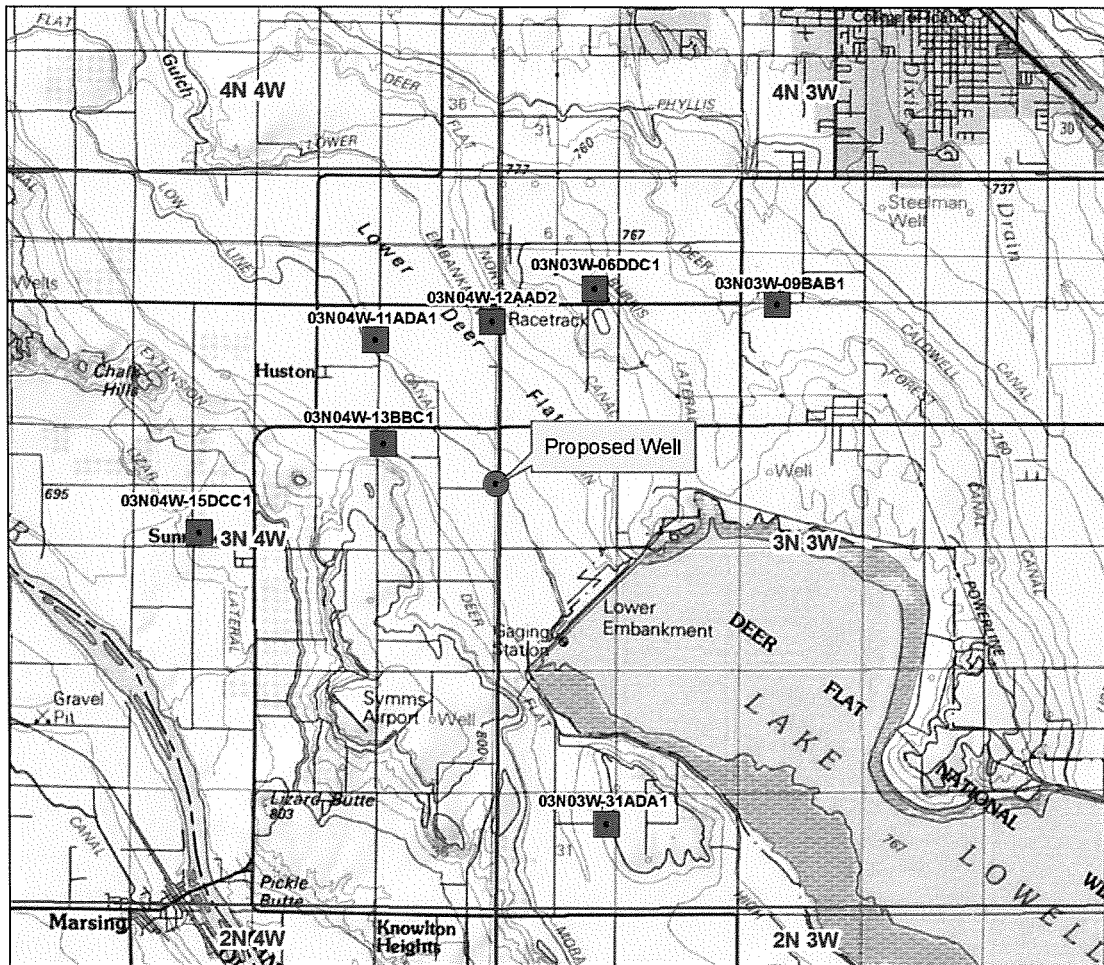


Figure 1: Ground water level monitoring wells near the proposed diversion.

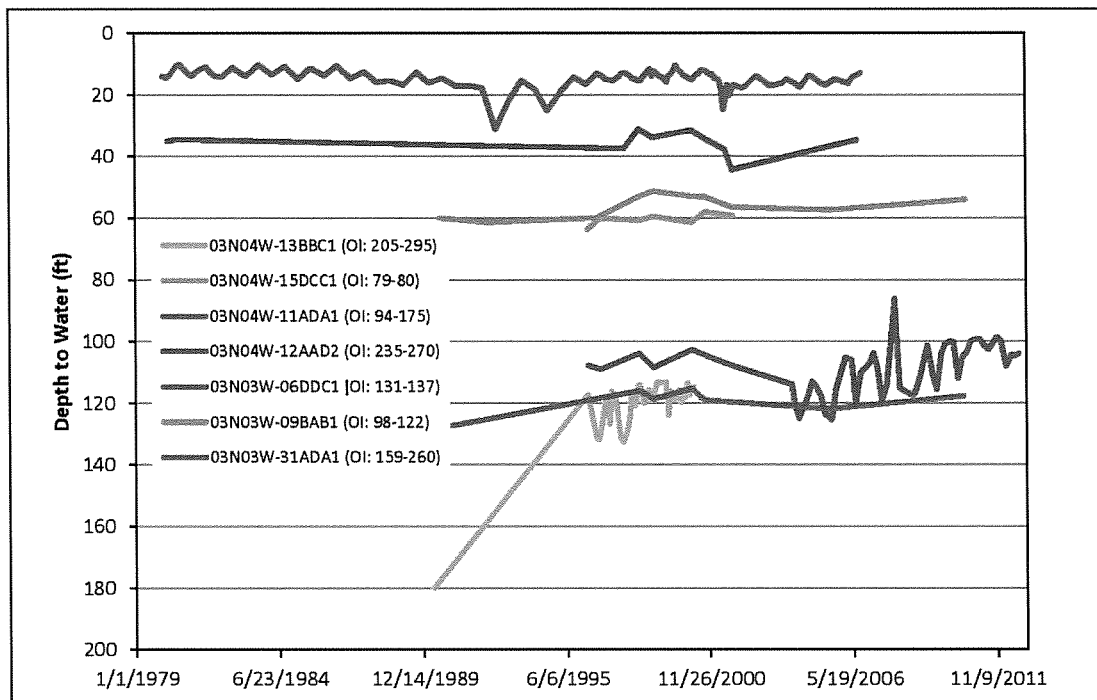


Figure 2: Water levels in monitoring wells.

Using the University of Idaho's $ET_{Idaho}2012$ and the Deer Flat Dam climate station, we project that if ground water is needed beginning August 1st, ground water will supply approximately 93 acre-feet of the total 318 acre-feet of precipitation-deficit potato crop water needs this season.

During normal water-supply years, surface water supplies are expected to meet all, or nearly all, of typical crop requirements. Assuming that ground water was needed on or about September 15, and typical crop rotation of potatoes, spring grain, sugar beets and field corn, ground water will supply approximately 16 acre-feet of precipitation-deficit crop demands each year. The average diversion rate required to supply 16 acre-feet over the anticipated 15-day period is 241 gpm.

Table 1 presents anticipated total precipitation-deficit crop water requirements for typical rotations and quantities supplied by Nampa-Meridian Irrigation District (NMID) and ground water (GW) for both normal and low surface water supply conditions. These quantities are used to estimate anticipated aquifer drawdowns.

Table 1: Precipitation-deficit crop water requirements (acre-feet) and estimated quantity from Nampa-Meridian Irrigation District (NMID) and ground water (GW) for normal and low surface water supply availability.

	Normal Surface Supply Year				Low Surface Supply Year		
		Source				Source	
Crop	Total Pdef	NMID	GW	Total Pdef	NMID	GW	
Potatoes	318	307	11	318	225	93	
Spring Grain	254	254	0	254	254	0	
Sugar Beets	440	382	31	440	255	186	
Field Corn	326	297	22	326	187	140	
Average	335	310	16	335	230	105	

Table 2: Average diversion rate calculations.

Condition	Total Volume (af)	Days	Daily Volume (af)	Average Rate (cfs)	Average Rate (gpm)
Normal Surface Water Supply	16	15	1.07	0.54	241
Low Surface Water Supply	105	60	1.75	0.88	396
Long-term average	30.6	365	0.08	0.04	19

Impact on Other Wells

The Theis equation is used to estimate potential impacts to other wells under three conditions: 1) A low surface water supply year where ground water is required beginning August 1 to finish the season, 2) a normal surface water supply year where ground water use begins on September 15 to finish the season, and 3) a long-term average. The long-term average assumes one dry year, three normal years, and one wet year in a five-year period with the wet year requiring no ground water use. These analyses are based on averaged requirements for a crop rotation of potatoes, spring grain, sugar beets, and field corn.

The normal-year requirement is 16 acre-feet supplied over a 15-day period with an average corresponding diversion rate of 241 gpm. At 15-days of continuous pumping at 241 gpm, the analysis estimates a drawdown of 7.3 feet at 100-ft from the pumped well, and 4.3 feet at 500-ft from the pumped well (see Table 3).

The average dry-year requirement is 105 acre-feet supplied over a 60-day period (August and September) with a corresponding average diversion rate of 396 gpm.

With the long term described above, an annual diversion volume of 30.6 acre-feet is estimated with a corresponding continuous diversion rate of 19 gpm.

Over the long-term when annual diversion volumes are averaged over the entire year, anticipated aquifer drawdown are estimated to be less than one foot at a distance of 100 feet from the pumped well. In reality, the well will be used infrequently with greater drawdown over the period of use with subsequent aquifer recovery. Theis analysis estimates for a normal surface water supply year when ground water is required to finish a crop late in the season providing 16 acre-feet over 15 days is about 7 feet of drawdown at 100 feet from the pumped well and about 4 feet drawdown at 500 feet on the 15th day. For a very low water supply year where 105 acre-feet are withdrawn over 60 days, drawdowns at 100-ft distance are about 14 feet on the 60th day. These results are summarized in Table 3. Attachment B provides the Theis analysis results for all three conditions. The distances at which impacts become insignificant depends on the quantity of water required in any given season. For the purposes of this analysis, we suggest that an insignificant drawdown is ten feet.

Table 3: Theis Analysis Summary.

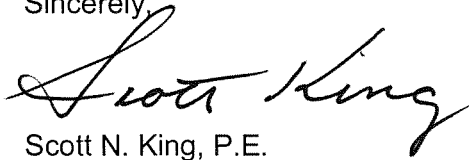
Theis Analysis Summary						
Condition	Rate (gpm)	Pumped Days	Drawdown at Distance (ft)			
			100 ft	500 ft	1000 ft	2500 ft
Normal Surface Supply Year	241	15	7.3	4.3	3.1	1.5
Low Surface Supply Year	396	60	14.1	9.2	7.1	4.4
Long-term Average	19	365	0.8	0.6	0.5	0.3

Injury to Canals

The ground water use proposed will be limited to times when surface water is unavailable, i.e., when canals are empty. Therefore, we anticipate that there will be no injury to nearby canals. The applicant, Jerome Wanders, spoke with Boise Project Board of Control Ditch C Board Member Ron Platt. Mr. Wanders reported that Mr. Platt did not expect any objections to the well permit. The high water table in the area causes salt accumulation problems. Lowered shallow ground water levels would help alleviate salt accumulation problems.

Please let us know if you have any further questions.

Sincerely,

A handwritten signature in black ink, reading "Scott King". The signature is fluid and cursive, with the first name "Scott" and last name "King" clearly distinguishable.

Scott N. King, P.E.
Supervising Engineer

cc: Jerome Wanders

File: 1025.0010

ATTACHMENT A

PRECIPITATION DEFICIT CROP WATER REQUIREMENTS

NORMAL YEAR (Ground water required beginning September 15)

Potatoes - cold pack (late harvest)												
Precipitation Deficit (Click here for a graph)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean ¹	mm/day											
Monthly ²	-0.13	0.19	0.11	0.63	2.53	5.7	6.61	4.83	1.52	-0.07	-0.35	-0.31
days/mo	31	28	31	30	31	30	31	31	30	31	30	31
mm/mo	-4.0	5.3	3.4	18.9	78.4	171.0	204.9	149.7	45.6	-2.2	-10.5	-9.6
ft/mo	-0.01	0.02	0.01	0.06	0.26	0.56	0.67	0.49	0.15	-0.01	-0.03	-0.03
Acres	145	145	145	145	145	145	145	145	145	145	145	145
af/mo	-1.9	2.5	1.6	9.0	37.3	81.3	97.5	71.2	21.7	-1.0	5.0	-4.6
Supply				NMID	NMID	NMID	NMID	NMID	NMID / GW			

total af 318.1
surface supply 307.2 97%
GW supply 10.8 3%

Spring Grain - Irrigated												
Precipitation Deficit (Click here for a graph)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean ¹	mm/day											
Monthly ²	-0.41	-0.03	0.5	2.38	5.43	7.03	2.65	0.02	-0.07	-0.15	-0.5	-0.65
days/mo	31	28	31	30	31	30	31	31	30	31	30	31
mm/mo	-12.7	-0.8	15.5	71.4	168.3	210.9	82.2	0.6	-2.1	-4.7	-15.0	-20.2
ft/mo	-0.04	0.00	0.05	0.23	0.55	0.69	0.27	0.00	-0.01	-0.02	-0.05	-0.07
Acres	145	145	145	145	145	145	145	145	145	145	145	145
af/mo	-6.0	-0.4	7.4	34.0	80.1	100.3	39.1	0.3	-1.0	-2.2	-7.1	-9.6
Supply				NMID	NMID	NMID	NMID	NMID				

total af 253.8
surface supply 253.8 100%
GW supply 0.0 0%

Sugar Beets												
Precipitation Deficit (Click here for a graph)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean ¹	mm/day											
Monthly ²	-0.13	0.21	0.02	0.35	2.41	6.72	8.02	6.49	4.4	1.84	-0.18	-0.45
days/mo	31	28	31	30	31	30	31	31	30	31	30	31
mm/mo	-4.0	5.9	0.6	10.5	74.7	201.6	248.6	201.2	132.0	57.0	-5.4	-14.0
ft/mo	-0.01	0.02	0.00	0.03	0.25	0.66	0.82	0.66	0.43	0.19	-0.02	-0.05
Acres	145	145	145	145	145	145	145	145	145	145	145	145
af/mo	-1.9	2.8	0.3	5.0	35.5	95.9	118.3	95.7	62.8	27.1	-2.6	-6.6
Supply				NMID	NMID	NMID	NMID	NMID	NMID / GW	GW		

total af 440.4
surface supply 381.8 87%
GW supply 31.4 7%

Field Corn - moderate season length												
Precipitation Deficit (Click here for a graph)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean ¹	mm/day											
Monthly ²	-0.29	0.16	-0.07	0.07	0.81	4.45	7.47	6.02	3.07	0.48	-0.31	-0.55
days/mo	31	28	31	30	31	30	31	31	30	31	30	31
mm/mo	-9.0	4.5	-2.2	2.1	25.1	133.5	231.6	186.6	92.1	14.9	-9.3	-17.1
ft/mo	-0.03	0.01	-0.01	0.01	0.08	0.44	0.76	0.61	0.30	0.05	-0.03	-0.06
Acres	145	145	145	145	145	145	145	145	145	145	145	145
af/mo	-4.3	2.1	-1.0	1.0	11.9	63.5	110.2	88.8	43.8	7.1	-4.4	-8.3
Supply				NMID	NMID	NMID	NMID	NMID	NMID / GW	GW		

total af 326.3
surface supply 297.3 91%
GW supply 21.9 7%

Averages
total af 334.6
surface supply 310.0 93%
GW supply 16.0 5%

DRY YEAR (Ground water required beginning August 1)

Potatoes - cold pack (late harvest)												
Precipitation Deficit (Click here for a graph)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean ¹	mm/day											
Monthly ²	-0.13	0.19	0.11	0.63	2.53	5.7	6.61	4.83	1.52	-0.07	-0.35	-0.31
days/mo	31	28	31	30	31	30	31	31	30	31	30	31
mm/mo	-4.0	5.3	3.4	18.9	78.4	171.0	204.9	149.7	45.6	-2.2	-10.5	-9.6
ft/mo	-0.01	0.02	0.01	0.06	0.26	0.56	0.67	0.49	0.15	-0.01	-0.03	-0.03
Acres	145	145	145	145	145	145	145	145	145	145	145	145
af/mo	-1.9	2.5	1.6	9.0	37.3	81.3	97.5	71.2	21.7	-1.0	-5.6	-4.8
Supply				NMD	NMD	NMD	NMD	GW	GW			

Spring Grain - Irrigated												
Precipitation Deficit (Click here for a graph)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean ¹	mm/day											
Monthly ²	-0.41	-0.03	0.5	2.38	5.43	7.03	2.65	0.02	-0.07	-0.15	-0.5	-0.65
days/mo	31	28	31	30	31	30	31	31	30	31	30	31
mm/mo	-12.7	-0.8	15.5	71.4	168.3	210.9	82.2	0.6	-2.1	-4.7	-15.0	-20.2
ft/mo	-0.04	0.00	0.05	0.23	0.53	0.69	0.27	0.00	-0.01	-0.02	-0.05	-0.07
Acres	145	145	145	145	145	145	145	145	145	145	145	145
af/mo	-6.0	-0.4	7.4	34.0	80.1	100.3	39.1	0.3	-1.0	-2.2	-7.1	-9.6
Supply				NM/D	NM/D	NM/D	NM/D	GW				

Sugar Beets												
Precipitation Deficit (Click here for a graph)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean ¹	mm/day											
Monthly ²	-0.13	0.21	0.02	0.35	2.41	6.72	8.02	6.48	4.4	1.84	-0.18	-0.45
days/mo	31	28	31	30	31	30	31	31	30	31	30	31
mm/mo	-4.0	5.9	0.6	10.5	74.7	201.6	248.6	201.2	132.0	57.0	-5.4	-14.0
ft/mo	-0.01	0.02	0.00	0.03	0.25	0.66	0.82	0.66	0.43	0.19	-0.02	-0.05
Acres	145	145	145	145	145	145	145	145	145	145	145	145
af/mo	-1.9	2.8	0.3	5.0	35.5	95.9	118.3	95.7	62.8	27.1	-2.6	-6.6
Supply				NM/D	NM/D	NM/D	NM/D	GW	GW	GW		

Field Corn - moderate season length												
Precipitation Deficit (Click here for a graph)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean ^j	mm/day											
Monthly ^k	-0.29	0.16	-0.07	0.07	0.81	4.45	7.47	6.02	3.07	0.48	-0.31	-0.55
days/mo	31	28	31	30	31	30	31	31	30	31	30	31
mm/mo	-9.0	4.5	-2.2	2.1	25.1	133.5	231.6	186.6	92.1	14.9	-9.3	-17.1
ft/mo	-0.03	0.01	-0.01	0.01	0.08	0.44	0.76	0.61	0.30	0.05	-0.03	-0.06
Acres	145	145	145	145	145	145	145	145	145	145	145	145
af/mo	-4.3	2.1	-1.0	1.0	11.9	63.5	110.2	88.8	43.8	7.1	-4.4	-8.1
Supply				NM/D	NM/D	NM/D	NM/D	GW	GW	GW		
	</											

Averages		
total af	334.6	
surface supply	230.0	69%
GW supply	104.6	31%

ATTACHMENT B

THEIS ANALYSIS

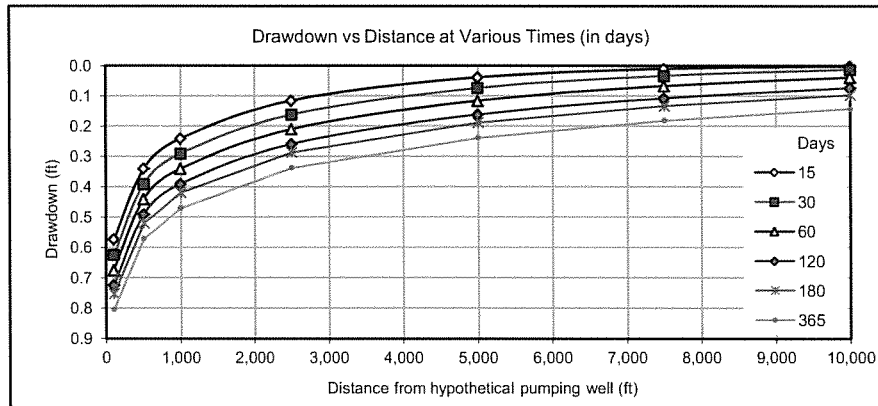
Theis Worksheet

Project: 63-33768. Long-term average (19 gpm, 365 days)
 Project Number: 1025.001

Assumed Parameter Values

Q=	19.0	(gpm)
T=	30,000	(gpd/ft)
S=	0.005	(dimensionless)

Time (days)	Time (minutes)	Radius (ft)						
		100	500	1,000	2,500	5,000	7,500	10,000
0.01	14	0.06	0.00	0.00	0.00	#NUM!	#NUM!	#NUM!
0.1	144	0.21	0.02	0.00	0.00	0.00	0.00	0.00
0.2	288	0.26	0.05	0.01	0.00	0.00	0.00	0.00
0.4	576	0.31	0.09	0.02	0.00	0.00	0.00	0.00
0.8	1152	0.36	0.13	0.05	0.00	0.00	0.00	0.00
1.0	1440	0.38	0.15	0.06	0.00	0.00	0.00	0.00
2.0	2880	0.43	0.20	0.10	0.02	0.00	0.00	0.00
7.0	10080	0.52	0.29	0.19	0.07	0.01	0.00	0.00
15.0	21600	0.57	0.34	0.24	0.12	0.04	0.01	0.00
30.0	43200	0.62	0.39	0.29	0.16	0.07	0.03	0.01
60.0	86400	0.67	0.44	0.34	0.21	0.12	0.07	0.04
120.0	172800	0.72	0.49	0.39	0.26	0.16	0.11	0.07
180.0	259200	0.75	0.52	0.42	0.29	0.19	0.13	0.10
365.0	525600	0.81	0.57	0.47	0.34	0.24	0.18	0.14



Assumptions

Assumptions inherent to the use of the non-equilibrium well equation (Theis, 1935) are that the aquifer is homogeneous and isotropic, uniform in thickness and areal extent, the aquifer receives no recharge, the pumping well penetrates the full aquifer thickness, water removed by discharge is removed instantaneously, the pumping well is 100 percent efficient, laminar flow exists throughout the aquifer, and that the water table or potentiometric surface has no slope. These assumptions are rarely completely satisfied under field conditions, but this method will often provide an indication of possible well interference.

Reference:

Theis, C.V., 1935. The relation between the lowering of the piezometric surface and the rate and duration of a well using ground-water storage. Transactions, American Geophysical Union, 16: 519-524

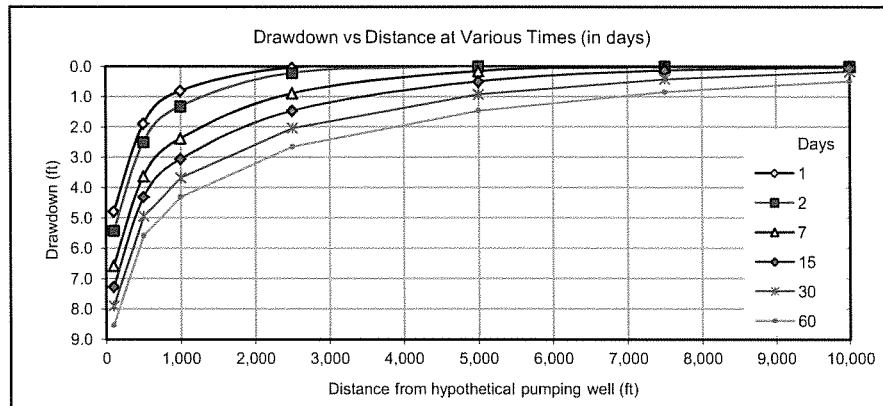
Theis Worksheet

Project: 63-33768. Normal year rotation (241 gpm, 15-days)
Project Number: 1025.001

Assumed Parameter Values

Q=	241.0	(gpm)
T=	30,000	(gpd/ft)
S=	0.005	(dimensionless)

Time (days)	Time (minutes)	Radius (ft)						
		100	500	1,000	2,500	5,000	7,500	10,000
0.01	14	0.81	0.00	0.00	0.00	#NUM!	#NUM!	#NUM!
0.1	144	2.69	0.30	0.01	0.00	0.00	0.00	0.00
0.2	288	3.31	0.66	0.07	0.00	0.00	0.00	0.00
0.4	576	3.95	1.15	0.30	0.00	0.00	0.00	0.00
0.8	1152	4.58	1.70	0.66	0.02	0.00	0.00	0.00
1.0	1440	4.78	1.89	0.81	0.04	0.00	0.00	0.00
2.0	2880	5.42	2.49	1.32	0.21	0.00	0.00	0.00
7.0	10080	6.57	3.62	2.37	0.89	0.15	0.02	0.00
15.0	21600	7.27	4.32	3.05	1.46	0.49	0.14	0.03
30.0	43200	7.91	4.95	3.68	2.04	0.93	0.43	0.17
60.0	86400	8.55	5.59	4.32	2.65	1.46	0.85	0.49
120.0	172800	9.19	6.23	4.95	3.28	2.04	1.37	0.93
180.0	259200	9.56	6.60	5.32	3.65	2.40	1.70	1.24
365.0	525600	10.21	7.25	5.97	4.29	3.03	2.31	1.81



Assumptions

Assumptions inherent to the use of the non-equilibrium well equation (Theis, 1935) are that the aquifer is homogeneous and isotropic, uniform in thickness and areal extent, the aquifer receives no recharge, the pumping well penetrates the full aquifer thickness, water removed by discharge is removed instantaneously, the pumping well is 100 percent efficient, laminar flow exists throughout the aquifer, and that the water table or potentiometric surface has no slope. These assumptions are rarely completely satisfied under field conditions, but this method will often provide an indication of possible well interference.

Reference:

Theis, C.V., 1935. The relation between the lowering of the piezometric surface and the rate and duration of a well using ground-water storage. Transactions, American Geophysical Union, 16: 519-524

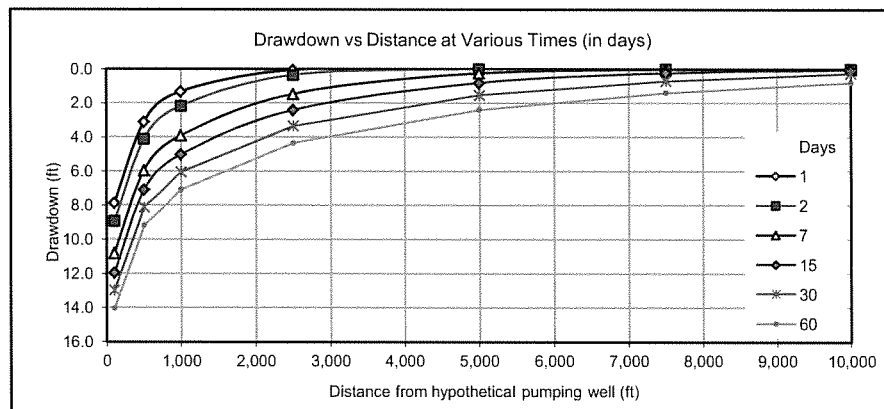
Theis Worksheet

Project: **63-33768. Dry year rotation (396 gpm, 60-days)**
 Project Number: **1025.001**

Assumed Parameter Values

Q=	396.0	(gpm)
T=	30,000	(gpd/ft)
S=	0.005	(dimensionless)

Time (days)	Time (minutes)	Radius (ft)						
		100	500	1,000	2,500	5,000	7,500	10,000
0.01	14	1.33	0.00	0.00	0.00	#NUM!	#NUM!	#NUM!
0.1	144	4.42	0.49	0.01	0.00	0.00	0.00	0.00
0.2	288	5.45	1.09	0.12	0.00	0.00	0.00	0.00
0.4	576	6.48	1.88	0.49	0.00	0.00	0.00	0.00
0.8	1152	7.53	2.79	1.09	0.03	0.00	0.00	0.00
1.0	1440	7.86	3.10	1.33	0.07	0.00	0.00	0.00
2.0	2880	8.91	4.09	2.17	0.35	0.00	0.00	0.00
7.0	10080	10.80	5.95	3.90	1.46	0.25	0.03	0.00
15.0	21600	11.95	7.09	5.02	2.40	0.81	0.22	0.05
30.0	43200	13.00	8.14	6.05	3.36	1.53	0.71	0.28
60.0	86400	14.05	9.18	7.09	4.36	2.40	1.40	0.81
120.0	172800	15.10	10.23	8.14	5.38	3.36	2.25	1.53
180.0	259200	15.71	10.84	8.75	5.99	3.94	2.79	2.03
365.0	525600	16.78	11.91	9.82	7.05	4.98	3.79	2.98



Assumptions

Assumptions inherent to the use of the non-equilibrium well equation (Theis, 1935) are that the aquifer is homogeneous and isotropic, uniform in thickness and areal extent, the aquifer receives no recharge, the pumping well penetrates the full aquifer thickness, water removed by discharge is removed instantaneously, the pumping well is 100 percent efficient, laminar flow exists throughout the aquifer, and that the water table or potentiometric surface has no slope. These assumptions are rarely completely satisfied under field conditions, but this method will often provide an indication of possible well interference.

Reference:

Theis, C.V., 1935. The relation between the lowering of the piezometric surface and the rate and duration of a well using ground-water storage. Transactions, American Geophysical Union, 16: 519-524

29512 888416

1 IDAHO DEPT. OF WATER RESOURCES

WESTERN REGION
2735 AIRPORT WAY
BOISE ID 83705

AFFIDAVIT OF PUBLICATION
STATE OF IDAHO)

County of Canyon)

Leann Nobella
of Nampa, Canyon County, Idaho, being
first duly sworn, deposes and says:

RECEIVED

MAY 28 2013

WATER RESOURCES
WESTERN REGION

1. That I am a citizen of the United States, and at all times hereinafter mentioned was over the age of eighteen years, and not a party to the above entitled action.
2. That I am the Principle Clerk of the Idaho Press-Tribune, a daily newspaper published in the City of Nampa, in the County of Canyon, State of Idaho; that the said newspaper is in general circulation in the said County of Canyon, and in the vicinity of Nampa and Caldwell, and has been uninterruptedly published in said County during a period of seventy-eight consecutive weeks prior to the first publication of this notice, a copy of which is hereto attached.
3. That the notice, of which the annexed is a printed copy, was published in said newspaper 2 times(s) in the regular and entire issue of said paper, and was printed in the newspaper proper, and not in a supplement.

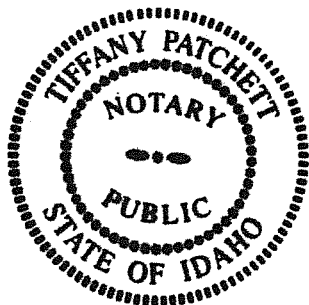
That said notice was published the following:
05/16/2013 05/23/2013

STATE OF IDAHO)

County of Canyon)

On this 23rd day of May in the year of 2013 before me a Notary Public, personally appeared. Leann Nobella, known or identified to me to be the person whose name is subscribed to the within instrument, and being by me first duly sworn, declared that the statements therein are true, and acknowledge to me that he/she executed the same.

Notary Public for Idaho
Residing at Canyon County
My Commission expires 09/12/2018



LEGAL NOTICE

The following applications have been filed to appropriate the public waters of the State of Idaho:

63-33750

CONSTANCE SCOTT
HAROLD D SCOTT
4101 ALMA LN
NAMPA, ID 83686
Point of Diversion SWSE S12 T02N R02W CANYON
County Source GROUND WATER
Use: IRRIGATION 03/01 to 11/15 0.92 CFS
Total Diversion: 0.92 CFS
Date Filed: 3/8/2013
Place Of Use: IRRIGATION
T02N R02W S12 NWSE SWSE
Total Acres: 46
Water bearing zone to be appropriated is from 20 to 100 feet.

63-33758

PATTY MUSSELL
MIKE MUSSELL
PO BOX 3304
NAMPA, ID 83653
Point of Diversion SWNE S13 T02N R04W CANYON
County Source GROUND WATER
Use: IRRIGATION 03/01 to 11/15 0.72 CFS
Total Diversion: 0.72 CFS
Date Filed: 4/12/2013
Place Of Use: IRRIGATION
T02N R04W S13 SWNE
Total Acres: 36
Water bearing zone to be appropriated is from 50 to 400 feet.

63-33759

ROWN FARMS LLC
913 W RIVER STE 110
BOISE, ID 83702
Points of Diversion SWNE L2(NWNE) S2 T03N R04W
CANYON County Source GROUND WATER
Use: IRRIGATION 03/01 to 11/15 1.72 CFS
Total Diversion: 1.72 CFS
Date Filed: 4/12/2013
Place Of Use: IRRIGATION
T03N R04W S2 L2(NWNE) SWNE
Total Acres: 86
Water bearing zone to be appropriated is from 600 to 800 feet.

63-33760

VERNON H PECHT
18233 MALT RD
CALDWELL, ID 83607-8901
Point of Diversion SWSE S36 T04N R04W CANYON
County Source GROUND WATER
Use: IRRIGATION 03/01 to 11/15 3.96 CFS
Total Diversion: 3.96 CFS
Date Filed: 4/10/2013
Place Of Use: IRRIGATION
T04N R03W S31 NESW NWSW L4(SWSW) SESW
T04N R04W S36 NESE NWSE SWSE
Total Acres: 240
Water bearing zone to be appropriated is from 50 to 200 feet
for a proposed supplemental well.

63-33763

KARCHER FARM LLC
5001 FIFESHIRE PL N
BOISE, ID 83713
Point of Diversion SENE S17 T03N R03W CANYON
County Source GROUND WATER
Use: IRRIGATION 03/01 to 11/15 1.64 CFS
Total Diversion: 1.64 CFS
Date Filed: 4/22/2013
Place Of Use: IRRIGATION
T03N R03W S17 NENE SENE NESE
Total Acres: 82
Water bearing zone to be appropriated is from 100 to 400 feet.

RECEIVED

MAY 28 2013

WATER RESOURCES
WESTERN REGION

63-33768

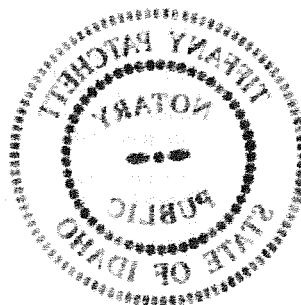
JEROME G WANDERS
15051 KINGS ROW DR
CALDWELL, ID 83607
Point of Diversion NESE S13 T03N R04W CANYON
County Source GROUND WATER
Use: IRRIGATION 03/01 to 11/15 2.9 CFS
Total Diversion: 2.9 CFS
Date Filed: 5/1/2013
Place Of Use: IRRIGATION
T03N R04W S13 ALL SE
Total Acres: 145
Water bearing zone to be appropriated for supplemental
irrigation is from 100 to 400 feet.

Permits will be subject to all prior water rights. For additional information concerning the property location, contact Western Region office at (208) 334-2190; or for a full description of the right(s), please see www.idwr.idaho.gov/apps/ExtSearch/WRFiling.asp. Protests may be submitted based on the criteria of Idaho Code § 42-203A. Any protest against the approval of this application must be filed with the Director, Dept. of Water Resources, Western Region, 2735 Airport Way, Boise ID 83705 together with a protest fee of \$25.00 for each application on or before 6/3/2013. The protestant must also send a copy of the protest to the applicant.

GARY SPACKMAN, Director

May 16, 23, 2013

888416



OK
6-10-13
RS