

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED
DEC 03 2010

RECEIVED
NOV 30 2010
WATER RESOURCES
WESTERN REGION

A. GENERAL INFORMATION

Permit No. 63-33022

1. Owner: City of Nampa Phone No.: 208-466-6000

Current Address: 411 3rd St. S., Nampa, ID 83651

2. Accompanied by: Albert Garcia EXAM DATE: 8/10/2010

Address: Nampa City Water Works, 24 1st St. S., Nampa, ID 83651 Phone No. 208-941-0047

Relationship to Permit Holder: Water System Technician, System Manager

3. Source: Ground Water tributary to _____

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 63-28219, 63-2779, 63-2781, 63-28220, 63-5258, 63-10212, 63-7567, 63-8324, 63-9180, 63-11511, 63-12474, 63-11729, 63-12591, 63-12543, 63-12463, 63-12506, 63-31243, 63-32835 (permit)

2. Other water rights with the same point of diversion: 63-12543

C. DIVERSION AND DELIVERY SYSTEM

1. Point(s) of Diversion:

Ident No.	Gov't Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.	County	Method of Determination/Remarks
			SE	SW	7	3N	1W	Canyon	Exam, 2009 Aerial Photo

2. Place(s) of Use

Indicate Method of Determination Exam

TWP	RGE	SEC	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	

Municipal use within the expanding
municipal service area for the City of
Nampa

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe id as applicable. **See Attachment B**

[illegible]

Scale: 1" = _____

X Copy of USGS Quadrangle Attached Showing location(s) of point(s) of diversion and place(s) of use (required).

X Aerial Photo Attached
(required for irrigation of 10+ acres)

X Photo of Diversion and System Attached
See Attachment F

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Well No. 16	US Motor	250	568235	Goulds 14RJHC 5-stage	12-inch; 250-foot setting

***Code to correspond with No. on map and aerial photo**

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Flowmeter	magnetic	Siemens Magflow	5100W	7ME652108302U139	12-inch	

2. Measurements: Not required; permit is for RAFN

E. NARRATIVE/REMARKS/COMMENTS

A 250-hp variable-speed line-shaft turbine well pump is installed in a 16-inch diameter well also known as Well 16. The well and pump supply water for use within the City of Nampa's potable municipal system. Pump capacity is currently approximately 3,000 gpm. The well is completed to a depth of 560 feet, with 16-inch casing to 390 feet and 10-inch casing and well screen to 440 feet.

In 2008, the City drilled a replacement well for Well 13. The replacement well, adjacent to Well 13, was named Well 16. Well 16 (then called Well 13) was originally authorized for diversion of 4.0 cfs for municipal use under license 63-12543. Application 63-33022 was filed as a result of a pump test performed by CH2M Hill on March 16, 2008. CH2M Hill provided step-rate test data (see Attachment C) that demonstrates Well 16 has the capacity to maintain a diversion rate of 3,815 gpm (8.5 cfs). The step-rate test was performed at a maximum pumping rate of 3,570 gpm with a pumping water level of approximately 180 feet. Projection of the step-rate test data indicates that the well could produce 3,815 gpm from a pumping water-level of less than 200 feet. The pump can be set below 200 feet.

This permit was issued for RAFN on the basis of documentation provided by the City in the form of a letter from its water counsel, Chris Meyer, dated July 28, 2009, and a letter report by the City's water rights consultants, SPF Water Engineering, also dated July 28, 2009. (Both are reproduced in Attachment D.) Because the permit was issued to meet the future needs of the City, the recommended diversion rate is based on the "capacity of the system" within the meaning of the 1996 Municipal Water Right Act, rather than a measured discharge (as detailed in IDWR's Administrative Memo #63). Under the Administrative Memo #63 guidance, the "capacity of the system" diversion rate is not necessarily limited to the physically constructed system if there is tangible evidence of the applicant's commitment to complete the diversion and delivery system and divert the water to beneficial use during the planning horizon. In this case, the tangible evidence of the City's commitment to complete the diversion is the fact that the well has been constructed with a capacity of 8.5 cfs. On October 5, 2009, the Department established a planning horizon for the City's municipal water system that currently runs through December 31, 2030. (See Condition No. 9 of Permit 63-33022, reproduced as Attachment A). Current pumping capacity for Well 16 is less than 8.5 cfs, but installed capacity is not relevant for licensing of an RAFN right. Licensing at the full permitted quantity of 4.5 cfs will allow the City to grow into this right over the course of the planning horizon.

A summary of the City's current water rights and installed capacity of the potable system is included in Attachment E. The City is currently authorized to divert 56.05 cfs from ground water for potable

municipal use (including the as-yet undeveloped permit 63-32835). The City's current or projected installed system capacity is 57.25 cfs. (This assumes the well developed under permit 63-32835 will deliver the 5 cfs permitted.) The above-referenced documentation in Attachment D established that the City will require a peak instantaneous flow of 58.38 cfs to meet future municipal demand for potable water (that is, non-irrigation uses including fire demands) by the year 2030. Licensing 63-33022 at the full permitted rate will bring the City's total water right portfolio to less than the projected demand of 58.38 cfs in 2030 (See Attachment E).

Attachment A: Approved Permit and *Proof of Beneficial Use*

Attachment B: Topographic map and aerial photos

Attachment C: Well test data provided by CH2M Hill and Well Driller's Report

Attachment D: Information supporting licensing as an RAFN water right

Attachment E: Water rights and authorized diversion rates

Attachment F: Photos of the diversion works

Have conditions of permit approval been met? ☒ yes ☐ no

F. FLOW CALCULATIONS

Yes Additional Computation Sheets Attached

Measured Method: (Well Log, Well Test and Pump Curve, Attachment C)

Well Test: 3,570 gpm with 180-foot pumping water level (185 feet drawdown minus 5 feet artesian pressure); 19.3 gpm/ft specific capacity

Projected capacity: 3,810 gpm (8.5 cfs) @ 19.3 gpm ft = 197 feet drawdown
197 feet drawdown minus 5 feet artesian pressure = 192-foot pumping water level

4.0 cfs is currently authorized for diversion from Well 16 under License 63-12543
Permit 63-33022 allows development of additional 4.5 cfs

Limit flow rate to permit maximum of 4.5 cfs based on well capacity

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$

$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 =$

$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} =$

2. Volume Calculations for Other Uses: Not Applicable

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use From To	Rate of Diversion Q (cfs)	Annual Volume V (afa)
Municipal	1/1 12/31	4.5	
Total		4.5 cfs	

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

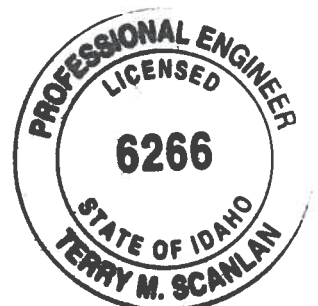
Field Examiner's Name Terry M. Scanlan, P.E., Certified Water Right Examiner 11-129 Date 11-26-10

Field Examiner's Signature



Reviewer _____ Date _____

SEAL



ATTACHMENT A

APPROVED PERMIT AND PROOF OF BENEFICIAL USE

State of Idaho
Department of Water Resources
Permit to Appropriate Water

NO. 63-33022

Priority: March 31, 2008

Maximum Diversion Rate: 4.50 CFS

This is to certify, that CITY OF NAMPA
411 3RD ST S
NAMPA ID 83651

has applied for a permit to appropriate water from:

Source: GROUND WATER

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

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>RATE OF DIVERSION</u>
MUNICIPAL	01/01 to 12/31	4.50 CFS

LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER SE1/4SW1/4 Sec. 7, Twp 03N, Rge 01W, B.M., CANYON County

PLACE OF USE: MUNICIPAL (See Conditions 3 and 4)

CONDITIONS OF APPROVAL

1. Proof of application of water to beneficial use shall be submitted on or before **October 01, 2011**.
2. Subject to all prior water rights.
3. A map depicting the place of use boundary for this water right at the time of this approval is attached to this document for illustrative purposes.
4. Place of use is within the service area of the City of Nampa municipal water supply system as provided for under Idaho Law.
5. 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.
6. After specific notification by the Department, the right holder shall install a suitable measuring device or shall enter into an agreement with the Department to use power records to determine the amount of water diverted and shall annually report the information to the Department.
7. This right does not grant any right-of-way or easement across the land of another.
8. The full system capacity necessary to provide water for the reasonably anticipated future needs authorized under this right must be constructed by the end of the designated planning horizon.
9. This right authorizes the diversion and use of 4.5 cfs for reasonably anticipated future needs for municipal purposes within the City of Nampa service area for a 21-year planning horizon ending December 31, 2030, pursuant to Section 42-202(B), Idaho Code.

State of Idaho
Department of Water Resources
Permit to Appropriate Water

NO. 63-33022

10. 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.
11. Point of diversion is Well # 16.

This permit is issued pursuant to the provisions of Section 42-204, Idaho Code. Witness the signature of the Director, affixed at Boise, this 5th day of October, 2009.


JOHN WESTRA, Western Regional Manager

ATTACHMENT B

TOPOGRAPHIC MAPS AND 2009 AERIAL PHOTOS

T3N R1E

2009 Photo

7
SESW

Legend



POD



Quarter-quarters



Sections

18

Permit 63-33022



0 130 260
Feet



SPF WATER
ENGINEERING

2009 Photo

T04N R03W

T04N R02W

T04N R01W

T03N R03W

T03N R02W

T03N R01W

T02N R03W

T02N R02W

T02N R01W

Legend



POD



Current GIS Shape for Nampa's Service Area



Township & Range

Permit 63-33022

0 3,750 7,500
Feet



SPF WATER
ENGINEERING

ATTACHMENT C

**WELL TEST DATA PROVIDED BY CH2M Hill
WELL DRILLER'S REPORT**

City of Nampa
Well 16 Step Test 03/10/2008

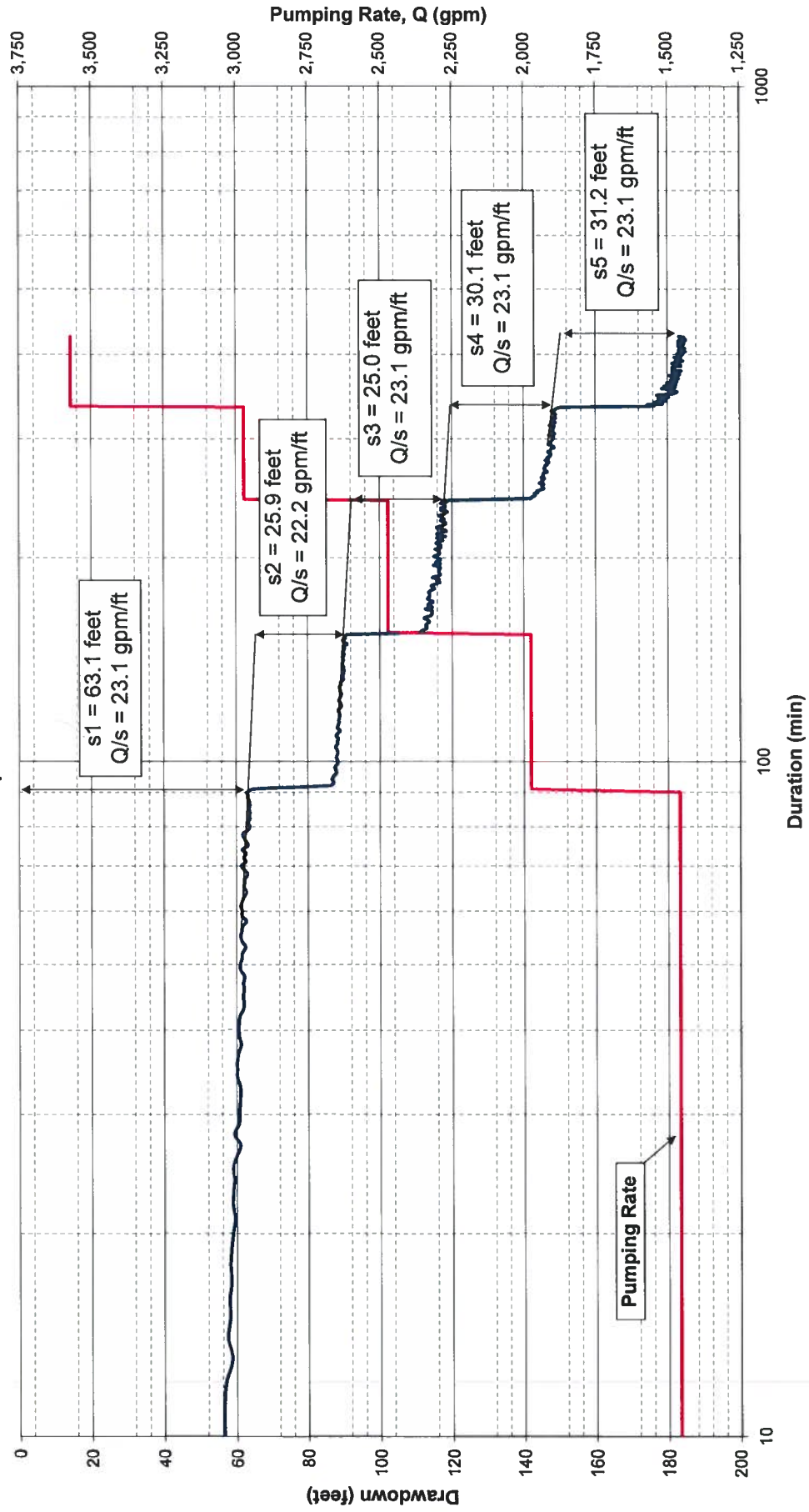


Figure 4-2
Well 16 Drilling Construction and Testing
City of Nampa

IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

850195

Office Use Only
Well ID No. 420055
Inspected by _____
Twp _____ Rge _____ Sec _____
1/4 _____ 1/4 _____ 1/4 _____
Lat: _____ Long: _____

APR 09 2008

1. WELL TAG NO. D 0052621
DRILLING PERMIT NO 903208-850195
Water Right or Injection Well No. 63-12543

2. OWNER:
Name CITY OF NAMPA
Address 411 3rd STREET SOUTH
City NAMPA State ID Zip 83651

3. LOCATION OF WELL by legal description: WELL #16

You must provide address or Lot, Blk, Sub. or Directions to well.

Twp. 3 North ☒ or South ☐
Rge. 1 East ☐ or West ☒
Sec. 7 1/4 SE 1/4 SW 1/4
Gov't Lot _____ County CANYON
Lat: _____ Long: _____
Address of Well Site W. FRANKLIN ROAD NEAR CAL
IDAHO CENTER City NAMPA
(Give at least name of road & Distance to Road or Landmark)
Lt. 2 Blk. 1 Sub. Name IDAHO CENTER

4. USE:

☐ Domestic ☒ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other _____

5. TYPE OF WORK check all that apply (Replacement etc.)
☐ New Well ☐ Modify ☐ Abandonment ☒ Other REPLACE

6. DRILL METHOD:

☐ Air Rotary ☐ Cable ☐ Mud Rotary ☒ Other REVERSE

7. SEALING PROCEDURES

Seal Material	From	To	Weight / Volume	Seal Placement Method
BENTONITE	0	42	8.500	DRY POUR
CEMENT GROUT	42	390	24 UNDO	PUMPED IN
BENTONITE	390	520	14.000	DRY POUR

Was drive shoe used? ☐ Y ☒ N
Was drive shoe seal tested? ☐ Y ☒ N How? _____

8. CASING/LINER: REDUCER 16" X 10" @ 390'

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
16	42	390	3.75	STEEL	☒	☐	☒	☐
10	391	410	3.65	S.S.	☒	☐	☒	☐
10	440	480	3.65	S.S.	☒	☐	☒	☐

Length of Headpipe _____ Length of Tailpipe 10' S.S.
Packer ☐ Y ☐ N Type _____

9. PERFORATIONS/SCREENS PACKER TYPE

Perforation Method _____
Screen Type & Method of Installation JOHNSON WIRE WRAP

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
410	440	.040		10	S.S.	☒	☐
480	510	.040		10	S.S.	☒	☐

10. FILTER PACK

Filter Material	From	To	Weight / Volume	Placement Method
CS&T #8-16	390	530	21,000	DRY POUR

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

_____ ft. below ground Artesian pressure 2 lb.
Depth flow encountered 410 ft. Describe access port or control devices:
3/4" PLUG IN TOP OF CAP

12. WATER RESOURCES WESTERN REGION

Yield gal./min	Drawdown	Pumping Level	Time
3010		170	24 HRS

Water Temp. 72° Bottom hole temp. _____
Water Quality test or comments _____

13. LITHOLOGIC LOG: (Describe repairs or abandonment) Water

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
24	0	3	TOP SOIL		X
	3	10	BURNT CLAY		X
	10	12	MED SAND		X
	12	21	BURNT CLAY		X
	21	58	SAND, GRAVEL, RIVER ROCK	X	
	58	75	BRN CLAY		X
	75	95	FINE-MED SAND	X	
	95	98	TAN CLAY		X
	98	107	FINE-MED SAND	X	
	107	110	TAN CLAY		X
	110	149	FINE-COARSE SAND	X	
	149	160	TAN CLAY w/SM SAND LAYER		X
	160	206	FINE-COARSE SAND	X	
	206	210	TAN CLAY		X
	210	244	FINE-MED SAND w/SM CLAY LAYER		X
	244	283	TAN CLAY		X
	283	291	FINE SAND	X	
	291	305	TAN CLAY		X
	305	317	FINE SAND	X	
	317	339	TAN, RUSTY, BRN CLAY w/SM SAND STREAK		X
	339	352	FINE-MED SAND	X	
	352	371	BRN CLAY w/SM FINE SAND STREAK		X
	371	377	FINE-COARSE SAND	X	
18	377	398	BRN, BLUE CLAY w/SM SAND STREAKS		X
	398	407	FINE SAND	X	
	407	413	CLAY		X
	413	440	FINE-MED SAND w/SM CLAY STREAK		X
	440	457	BLUE CLAY		X
	457	466	FINE BLUE SAND	X	
	466	489	BLUE CLAY		X
	489	514	FINE BLUE SAND	X	
	514	529	BLUE CLAY		X
	529	548	FINE BLUE SAND	X	
	548	560	BLUE CLAY		X

Completed Depth 520' (Measurable)
Date: Started 12-12-07 Completed 4-2-08

14. DRILLER'S CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name RIVERSIDE INC Firm No. 333
Principal Driller [Signature] Date 4-7-08
and _____
Driller or Operator II _____ Date _____
Operator I _____ Date _____

Principal Driller and Rig Operator Required.
Operator I must have signature of Driller/Operator II.

FORWARD WHITE COPY TO WATER RESOURCES

ATTACHMENT D
SUPPORTING INFORMATION

GIVENS PURSLEY LLP

LAW OFFICES

601 W. Bannock Street
PO Box 2720, Boise, Idaho 83701
TELEPHONE: 208 388-1200
FACSIMILE: 208 388-1300
WEBSITE: www.givenspursley.com

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Thomas E. Dvorak
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Jeremy G. Ladle
Michael P. Lawrence
Franklin G. Lee
David R. Lombardi
John M. Marshall
Kenneth R. McClure
Kelly Greene McConnell
Cynthia A. Mello
Christopher H. Meyer
L. Edward Miller
Patrick J. Miller

Judson B. Montgomery
Deborah E. Nelson
Kelsey J. Nunez
W. Hugh O'Riordan, LL.M.
Angela M. Reed
Justin A. Steiner
Scott A. Tschirgi, LL.M.
J. Will Varin
Conley E. Ward
Robert B. White

RETIRED
Kenneth L. Pursley
James A. McClure
Raymond D. Givens (1917-2008)

July 28, 2009

John Westra
Manager
Western Regional Office
Idaho Department of Water Resources
2735 Airport Way
Boise, ID 83705-5082

Re: *City of Nampa – Applications for Permits # 63-32835 and # 63-33022
(serving RAFN)*

Dear John:

This follows up on our prior correspondence in connection with the City of Nampa's above-referenced applications for permits and our meeting in your office on July 14, 2009. Prior correspondence was initiated by your letter of January 20, 2009 addressed to Roxanne Brown of SPF Water Engineering, LLC. I responded by letter of March 5, 2009. We also exchanged emails on March 9 and 11, 2009.

Quantification effort

As we explained, we held up getting back to you while Nampa's engineering and water rights consultants completed their evaluation of the City's potable system water rights portfolio and future needs. This has been a multi-year task involving considerable effort by J-U-B Engineers, CH2M Hill, SPF Water Engineering, Taylor Planning, Givens Pursley, and City staff.

We are now in a position to provide the following key pieces of information:

- (1) a quantification of the City's portfolio of rights serving its integrated potable water delivery system (currently 43.95 cfs, increasing to 53.45 cfs with the addition of Nos. 63-33022 and 63-32835).*
- (2) a quantification of the City's portfolio of rights not currently serving its integrated potable water delivery system, but which might some day serve that system (2.68 cfs).

* Note: The current portfolio of water rights totals 56.05 cfs, which includes the previously unreported water right 63-31243 (Belmont). RB 11/29/2010

John Westra
July 28, 2009
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- (3) a quantification of the City's total installed capacity for its integrated potable water delivery system (currently 45.15 cfs, increasing to 54.65 cfs with the addition of the wells associated with Nos. 63-33022 and 63-32835).
- (4) a quantification of the City's reasonably anticipated future needs ("RAFN") for its integrated potable water delivery system for a planning horizon through the year 2030 (58.38 cfs).

Current portfolio

The City's current water right portfolio for its integrated potable water delivery system is summarized on the attached spreadsheet. (These numbers correspond, as well, to the numbers set out in the attached letter report from SPF.) These rights sum to 43.95 cfs for all partial decrees, post-SRBA licensed rights, and post-SRBA permits that serve its integrated system. This number assumes that licenses ultimately will be issued for the two existing permits (Nos. 63-12474 and 63-12506) at the full permitted diversion rates. This number does not include the 9.50 cfs sought under the two applications for permit (Nos. 63-33022 and 63-32835).

Arguably, three rights totaling 2.68 cfs (excluding 0.04 cfs for stockwater) owned by the City but not currently serving the City's integrated potable water system (Nos. 63-31243, 63-11339, and 63-20264) should be included within the portfolio of rights available for RAFN. In theory, the wells served by these rights could be joined to the City's integrated delivery system in the future. Without conceding that these rights should be included, we have displayed them here nonetheless for purposes of the analysis presented with this letter. The addition of these three rights brings the City's current portfolio of potable rights to 46.63 cfs (not including Nos. 63-33022 and 63-32835).

Current installed capacity

The City's current installed capacity associated with its integrated potable water delivery system is 45.15 cfs. This number is based on the sum of the individual pumping capacities for each of the wells in the system, excluding the new well known as Coyote Springs associated with No. 63-32835 and excluding the additional capacity in Well No. 16 sought by No. 63-33022. This quantification is based on summing the capacities of each individual well. It is possible that the combined system-wide pumping capacity is somewhat less. We have not calculated that.

Future needs

In any event, the City's portfolio of potable system rights (46.63 cfs) slightly exceeds the total current installed pumping capacity based on individual wells (45.15). Thus, under the Department's draft guidance on municipal water rights, non-RAFN permits for additional flow rate would not be approved. Even if approved subject to the Department's standard condition for new municipal permits (see condition #2 on Water Right No. 63-32157 owned by the City of

John Westra
July 28, 2009
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Caldwell), it is unlikely that the City would be able to prove need for additional non-RAFN water rights by time of proof.

Accordingly, as we have discussed on prior occasions, the City asks that the above-referenced applications be issued as RAFN permits. This is consistent with the City's long-term water supply objectives in seeking these and other permits.

Documentation

The required documentation to support issuance of these permits for RAFN is available, thanks to the hard work done over the last several years in evaluating the City's current system and projecting its future needs. That work is discussed and explained in detail in the enclosed letter report from SPF Water Engineering. The SPF letter report is based, in turn, on work performed by J-U-B Engineers, Taylor Planning, and CH2M Hill. The bottom line is that the City will require a peak instantaneous flow of 58.38 cfs to meet maximum domestic and fire demand by the year 2030. The addition of the above-captioned permits will bring the City's total portfolio of integrated-system and non-integrated-system potable rights to 56.13 cfs, which is still less than projected demand in 2030 (58.38 cfs). Accordingly, issuance of these permits for RAFN purposes is appropriate under the Department's draft guidance.

The enclosed letter report by SPF (which also reflects the work of J-U-B, Taylor Planning, and CH2M Hill) provides the information you outlined in our meeting on July 14, 2009. Specifically:

- It documents and explains the basis for the 2030 planning horizon.
- It documents and explains the basis for quantification of RAFN over this planning horizon.
- It describes the City's planning process and its commitment to construction of infrastructure for water diversion and delivery over the course of the planning horizon.

Planning horizon

By the way, the City recognizes that the 21 years remaining before 2030 is a relatively short planning horizon. Ultimately, the City anticipates documenting its RAFN over a longer planning horizon. The present documentation of RAFN for the year 2030, however, is sufficient to form the basis for issuance of the above-captioned water right permits as RAFN.

Conclusion

On behalf of the City, I thank you and your staff for your help in processing these applications for permit. You offered to provide a draft of the condition language that would

Nampa's Potable System Water Rights (SRBA and Post-SRBA Rights)

Prepared by Chris Meyer, Givens Pursley

Row	Water Right No.	Original Well	Authorized Diversion Rate (cfs)	Current or Projected Well Capacity (cfs)	Priority	Authorized Purpose	Period of Use	Status
The following water rights and permits are part of the City's integrated potable water delivery system:								
1	63-28219	Wells #1 & #2	1.22	0.00	12/24/1937	Municipal	1/1 to 12/31	Partial decree 6-3-2009
2	63-02779	Well #3	2.00	1.58	9/2/1949	Municipal	1/1 to 12/31	Partial decree 6-3-2009
3	63-02781	Well #4	3.00	1.78	9/2/1949	Municipal	1/1 to 12/31	Partial decree 6-3-2009
4	63-28220	Well #5	1.93	1.45	12/1/1949	Municipal	1/1 to 12/31	Partial decree 6-3-2009
5	63-05258	Well #6	2.10	2.23	7/20/1954	Municipal	1/1 to 12/31	Partial decree 6-3-2009
6	63-10212	Well #7	2.23	2.23	6/28/1983	Municipal	1/1 to 12/31	Partial decree 6-3-2009
7	63-07567	Well #8	2.79	2.23	3/8/1972	Municipal	1/1 to 12/31	Partial decree 6-3-2009
8	63-08324	Well #9 (1st right)	3.00	4.48	6/1/1976	Municipal	1/1 to 12/31	Partial decree 6-3-2009
9	63-11511	Well #9 (2nd right)	1.50		3/28/1990	Municipal	1/1 to 12/31	Licensed 4-30-1994
10	63-09180	Well #10	4.00	6.69	9/27/1978	Municipal	1/1 to 12/31	Partial decree 6-3-2009
11	63-12474	Well #11	3.50	5.28	10/11/1998	Municipal	1/1 to 12/31	Permit 1-12-1999. Field exam completed by IDWR on 2-9-2000. No license yet (in backlog).
12	63-11729	Well #12	2.68	2.68	3/6/1992	Municipal	1/1 to 12/31	Licensed 4-30-1994
13	63-12591	Well #14	3.50	3.35	8/21/2000	Municipal	1/1 to 12/31	Licensed 7-28-2008
14	63-12543	Well #16 (1st right)	4.00	4.00	7/30/1999	Municipal	1/1 to 12/31	Licensed 2-1-2008
15	63-12463	Well #17	3.00	2.68	6/25/1998	Municipal	1/1 to 12/31	Licensed 8-12-2008
16	63-12506	Coventry Place	3.50	4.55	2/2/1999	Municipal	1/1 to 12/31	Permit reinstated 6-3-2009. Field exam completed by SPF but not yet submitted.
The following applications for permit will be used for the City's integrated potable water delivery system:								
17	63-33022	Well #18 (2nd right)	4.50	4.50	3/31/2008	Municipal	1/1 to 12/31	Application for permit pending.
18	63-32835	Coyote Springs	5.00	5.00	8/18/2007	Municipal	1/1 to 12/31	Application for permit pending.
The following rights were disallowed:								
19	63-2533	Wells #1 & 2	0.00	0.00				
20	63-2782	Wells #1 & 2	0.00	0.00				
The following water rights are not part of the City's integrated potable water delivery system:								
21	63-31243	Belmont Heights	2.60		5/14/2001	Municipal	1/1 to 12/31	Permitted 9-24-01. Field exam completed by SPF but not yet submitted.
22	63-11339	Model Airplane Club	0.04		3/28/1990	Domestic	1/1 to 12/31	Licensed 12-19-1995.
23	63-20264	Unnamed well	0.04		6/3/1925	Domestic	1/1 to 12/31	Licensed.
			0.02			Stockwater	1/1 to 12/31	
INTEGRATED SYSTEM TOTALS:								
		SRBA partial decrees	22.27					
		Licensed	14.68					
		Permits	7.00					
	Subtotal:	(SRBA+license+permit)	43.95	45.15				
		Applications for permit	9.50	9.50				
	Grand Total:	(All right, permits & apps)	53.45	54.65				
NON-INTEGRATED SYSTEM TOTALS:								
		Potable only	2.68					
		Stockwater	0.02					
INTEGRATED AND NON-INTEGRATED TOTALS:								
	Subtotal:	(SRBA+license+permit)	46.63					
	Grand Total:	(All right, permits & apps)	56.13					

John Westra
July 28, 2009
Page 4

accompany these permits. It is my understanding that this condition will outline considerations regarding proof in accordance with Administrative Memorandum, Application Processing No. 63. I appreciate that offer, and will look forward to seeing your proposed language.

Sincerely,


Christopher H. Meyer

Encl: Spreadsheet summarizing City of Nampa's portfolio of water rights for its integrated potable water delivery system.
July 28, 2009 letter report from SPF Water Engineering providing documentation of 2030 planning horizon and quantification of RAFN.

cc/pc: Michael J. Fuss, Director, Public Works Department
Lenard Grady, City Engineer
Fred Snoderly, Superintendent, Waterworks Division
Roxanne Brown, SPF Water Engineering, LLC
David L. Bauer and Ken Gingrich, J-U-B Engineers
Kevin Boggs, CH2M Hill

CHM:ch

4628-1_612859_6.DOC



July 28, 2009

Christopher H. Meyer
Givens Pursley
Via email

Re: City of Nampa Potable Water Supply, Water Rights and Future Demands

Dear Chris,

What follows is a summary of data reviewed by SPF during the preparation of the "Potable Domestic System Water Rights Master Plan" for the City of Nampa (May 2008). We also include a summary of our analysis.

The SPF report was limited to the investigation of domestic water rights only, and did not include physical water system components such as wells, pumping facilities, or distribution piping. A separate water system master plan was prepared by CH2M Hill to evaluate the City of Nampa's water infrastructure for the municipal potable system.¹ The CH2M Hill water system master plan also documented current water demands (as of 2007), and predicted future water demands (2015 and 2030). This information was analyzed by SPF and the CH2M Hill findings were incorporated into the water rights master plan.

CH2M Hill relied on a demographics forecast prepared by J-U-B Engineers and Taylor Planning when predicting future water demands.²

The City of Nampa (the City) has gone to significant time and expense to update their water system planning for their potable municipal supply system. The CH2M Hill master plan gives specific recommendations for the construction of infrastructure over the course of the planning horizon detailed in their report (2030). SPF makes further recommendations in its water right master plan concerning the City's water right portfolio.

Water Right Analysis

The current water right portfolio for the City of Nampa integrated potable water supply includes the wells and water rights summarized in Table 1. The City of Nampa also operates several isolated wells for domestic potable use; those additional water rights are shown in Table 2.

¹ "Water Master Plan", CH2M Hill, 2008

² "Demographics Forecast and Land Use Analysis for the Nampa Study Area and South Study Area", J-U-B et al., 2008

SPF has conducted a field examination for 63-31243. The authorized diversion rate for this permit is assumed to be correct based on data collected by SPF.

Pumping Capacity

The current installed pumping capacity of the City's integrated potable supply wells is 45.15 cfs, based on the data summarized in Table 3.

Well Number	Authorized Diversion Rate (cfs)	Current Well Capacity (gpm) ¹	Current Well Capacity (cfs)
1,2	1.22	0	0
3	2.00	700	1.56
4	3.00	800	1.78
5	1.93	650	1.45
6	2.10	1,000	2.23
7	2.23	1,000	2.23
8	2.79	1,000	2.23
9	4.50	2,000	4.46
10	4.00	3,000 ²	6.69
11	3.50	2,359	5.26 ³
12	2.68	1,200	2.68
14	3.50	1,500	3.35
16	4.00	1,800	4.00
17	3.00	1,200	2.68
Coventry Place	3.50	2,045	4.55 ⁴
System Total	43.95	20,254	45.15

Notes:

¹ Estimated by CH2M Hill, unless specified otherwise.

² Estimated capacity after SPF rehabilitation of well in 2009.

³ Determined by IDWR during preparation of the "Beneficial Use Field Report".

⁴ Determined by SPF during preparation of the "Beneficial Use Field Report".

Table 3: Current Pumping Capacities

Current and Future Demands

Current and future water demands were calculated by CH2M Hill and are summarized in Table 4.

J-U-B and Taylor Planning developed population and growth estimates for the City based on regional population forecasts and historic building permit data. CH2M Hill used those estimates to calculate future water demands.

According to CH2M Hill, the population of the City in 2007 reached 81,354. As reported by J-U-B, the population is expected to reach 184,000 by 2030.¹ CH2M Hill applied a per-capita average day demand (ADD) value and peaking factor to arrive at the projections summarized in Table 4.

Year	MDD (mgd)	MDD (cfs)	MDD plus fire flow (cfs)	PHD (mgd)	PHD (cfs)
2007	11.6	17.92	27.92	16.2	25.02
2015	18.2	28.11	38.11	25.5	39.38
2030	27.0	41.70	51.70	37.8	58.38
Notes: cfs - cubic feet per second mgd - million gallons per day MDD - maximum day demand PHD - peak hour demand					

Table 4: Current and Future Water Demands

The *Idaho Rules for Public Drinking Water Systems* require the City to supply maximum day demands from well capacity. Therefore, the City must have adequate water rights and well capacity to meet the projected maximum day demand. Peak hour demands (or maximum day demands plus fire flow) can be supplied using a combination of pump capacity and storage. In other words, the City can have less water right and pump capacity than the peak hour demand, if it develops adequate storage capacity. Historically, the City has supplied peak hour demands almost entirely from well capacity.

¹ Based on "Economic and Population Forecasts for Ada and Canyon Counties in Idaho, 2007-2040", prepared for COMPASS by John Church, Idaho Economics, 2007

Summary

Whether to supply peak hour demands from developed storage capacity or the amount of well capacity (and the water right portfolio) is a decision that must be made by the City. In other words, it may be more cost effective to construct additional wells to meet peak hour demand than to construct storage reservoirs and booster pumps. For this reason, the City's water right portfolio should be maintained and enhanced to provide future peak hour demands. CH2M Hill estimates the City will require approximately 58 cfs to meet peak hour demands in 2030.

Best Regards,



Roxanne Brown
Sr. Water Rights Specialist

SPF Job No. 270.0070



ATTACHMENT E

WATER RIGHTS PORTFOLIO

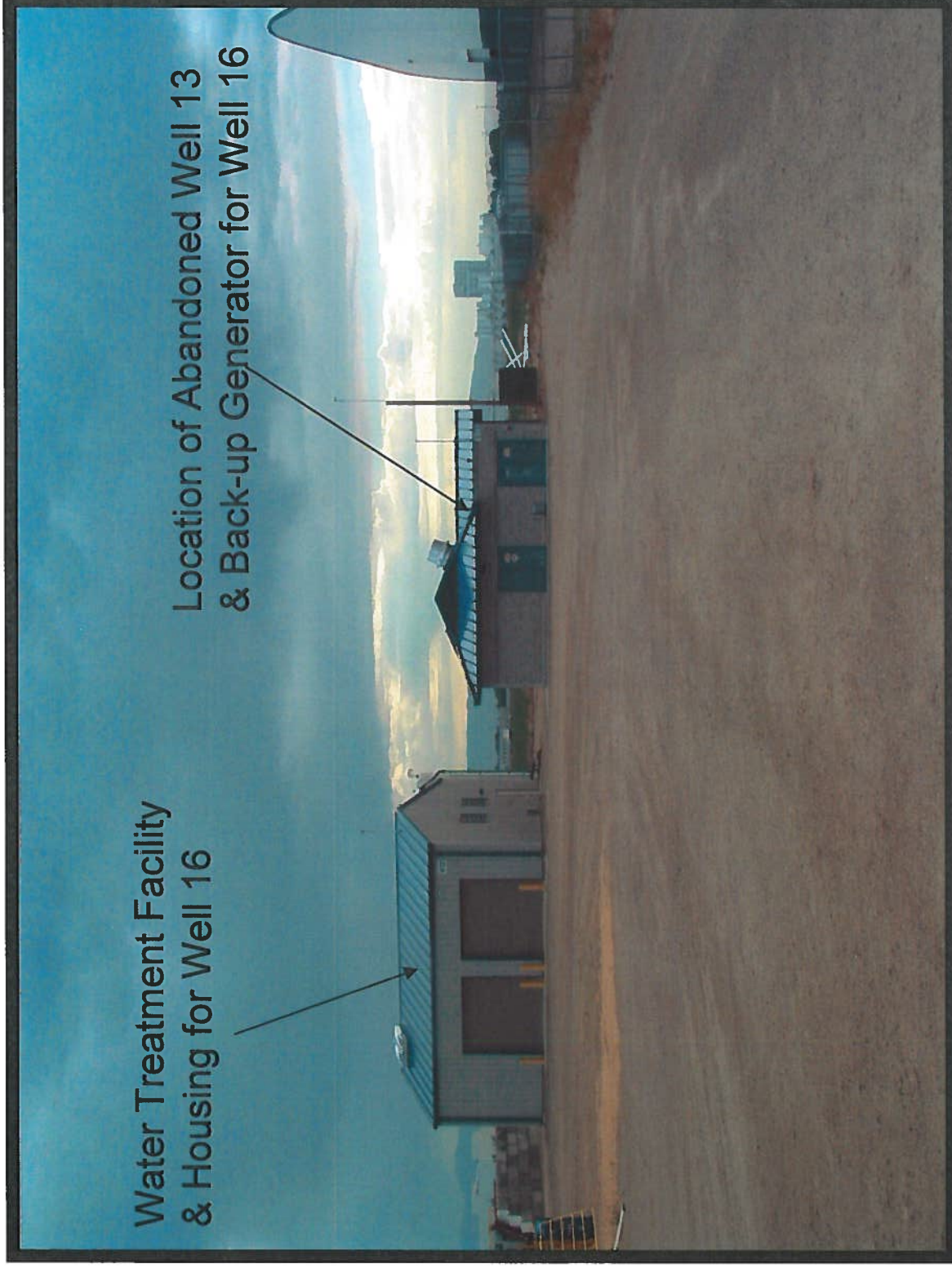
POTABLE SYSTEM

	A	B	C	E	F	G
1	Integrated System					
	Water Right No.	Well No. or Name	Authorized Diversion Rate (cfs)	Place of Use	Water Right Status	Notes
2						
3	63-28219	1,2	1.22	Municipal Area	Partial Decree issued 6/3/2009	SRBA decree integrated water rights
4	63-2779	3	2.00	Municipal Area	Partial Decree issued 6/3/2009	SRBA decree integrated water rights
5	63-2781	4	3.00	Municipal Area	Partial Decree issued 6/3/2009	SRBA decree integrated water rights
6	63-28220	5	1.93	Municipal Area	Partial Decree issued 6/3/2009	SRBA decree integrated water rights
7	63-5258	6	2.10	Municipal Area	Partial Decree issued 6/3/2009	SRBA decree integrated water rights
8	63-10212	7	2.23	Municipal Area	Partial Decree issued 6/3/2009	SRBA decree integrated water rights
9	63-7567	8	2.79	Municipal Area	Partial Decree issued 6/3/2009	SRBA decree integrated water rights
10	63-8324	9	3.00	Municipal Area	Partial Decree issued 6/3/2009	SRBA decree integrated water rights
11	63-9180	10	4.00	Municipal Area	Partial Decree issued 6/3/2009	SRBA decree integrated water rights
12	63-11511	9	1.50	Municipal Area	License issued 4/30/1994	2nd right for Well 9
13	63-12474	11	3.50	Municipal Area	Permit issued 1/12/1999	field exam completed by IDWR
14	63-11729	12	2.68	Municipal Area	License issued 4/30/1994	
15	63-12591	14	3.50	Municipal Area	License issued 7/28/2008	
16	63-12543	16	4.00	Municipal Area	License issued 2/1/2008	water right for original Well 13
17	63-33022	16	4.50	Municipal Area	Permit	field exam conducted by SPF 8/2010
18	63-12463	17	3.00	Municipal Area	License issued 8/12/2008	
19	63-12506	Coventry	3.50	Municipal Area	Permit	field exam submitted by SPF
20	63-31243	Belmont	2.60	Municipal Area	Permit	field exam submitted by SPF
21	63-32835	Coyote Springs	5.00	Municipal Area	Permit	proof due 10/1/2014
22		Totals	56.05			

ATTACHMENT F
DIVERSION WORKS PHOTOS

Water Treatment Facility
& Housing for Well 16

Location of Abandoned Well 13
& Back-up Generator for Well 16



Diversion Site



Well 16 Vertical Turbine Pump



Well Pump VFD



Flowmeter



Static Water Level and Flowmeter Monitoring Systems



Water Treatment System – Pressure Filters



Chlorine Feed Pumps

MEDIA FILTERS
HOLLISTER, CA



Filter Backwash Control



Back-up Generator



Abandoned Well 13