

FEB 13 2019

DEPARTMENT OF
WATER RESOURCES**GIVENS PURSLEY LLP**
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Kenneth L. Pursley (1940-2015)
James A. McClure (1924-2011)
Raymond D. Givens (1917-2008)

February 13, 2019

Via Hand Delivery and email

Shelley W. Keen
Water Allocation Bureau Chief
Idaho Department of Water Resources
The Idaho Water Center
322 E Front St
Boise, ID 83702
shelley.keen@idwr.idaho.gov

Re: City of Nampa – Water Right No. 63-32835 (lapsed RAFN permit for
Well #20 aka Coyote Springs)

Dear Shelley:

I am writing to follow up on prior correspondence regarding the City of Nampa's lapsed permit for its municipal Well #20 (also known as Coyote Springs), No. 63-32835. As you know, the City seeks reinstatement of this permit and its licensing as a RAFN water right.

On October 25, 2017, you wrote to me outlining the additional information the City needed to provide to complete the reinstatement and licensing process. The City provided that information in two responses. The first was a letter of June 15, 2018 from SPF Water Engineering.¹ The second was a memorandum from me dated September 19, 2018. My memorandum provided an integrated demand gap analysis for the City's potable and irrigation water rights. I enclose copies of those responses for your convenience.

¹ The SPF letter was signed by Roxanne Brown. As you probably know, she recently retired. SPF principal Terry Scanlan is now the lead consultant for the City on this matter. Likewise, Michael Fuss has moved on and has been replaced by Tom Points as Director of Public Works. Feel free to reach out to Terry Scanlan, Tom Points, Nate Runyan, or me on this or any other matters involving the City's water rights.

Shelley W. Keen
February 13, 2019
Page 2 of 4

By the way, I note that IDWR's website does not profile these responses under the electronic file for No. 63-32835. The last item posted is your letter of October 25, 2017, which may explain why we have not heard from you.

I am writing to inquire whether our 2018 submissions provide everything the Department needs. If there is something further we may provide to assist the Department in its processing, we would be pleased to provide it. Otherwise, we look forward to hearing from you on this pending matter.

As always, the City very much appreciates the good work of the Department, particularly with respect to the progress being made as the City strives to fully integrate its potable and irrigation water rights systems and water rights portfolio.

Sincerely,



Christopher H. Meyer

Encl: Copy of SPF letter (6/15/2018)
Copy of Givens Pursley letter (9/19/2018)

cc: (via email w/o enclosures)
Manuel Rauhut, Staff Engineer, Western Regional Office, IDWR
Erik Boe, Staff Engineer, Western Regional Office, IDWR
Tom Points, Director, Public Works Department, City of Nampa
Nate W. Runyan, Deputy Director, Public Works Department, City of Nampa
Terry M. Scanlan, Principal Engineer/Hydrogeologist, SPF Water Engineering

Shelley W. Keen
February 13, 2019
Page 3 of 4

ENCLOSURE #1 –
COPY OF SPF LETTER (6/15/2018)

RECEIVED

JUN 15 2018

DEPARTMENT OF
WATER RESOURCES

June 15, 2018

Shelley Keen
Idaho Department of Water Resources
322 E. Front St.
P.O. Box 83720
Boise, ID 83720-0098

Re: Permit No. 63-32835 (City of Nampa)

Dear Shelley,

I am writing on behalf of the City of Nampa (City) in response to your correspondence to Chris Meyer dated October 25, 2017. I have consulted with Chris in preparing this response. The City seeks reinstatement of Permit No. 63-32835 (the Permit) and issuance of a water right license for reasonably anticipated future needs (RAFN). This letter provides the documentation requested in your letter, together with an accompanying beneficial use field report prepared by SPF Water Engineering (SPF).

BACKGROUND INFORMATION

The Permit was issued on October 5, 2009 for 5.0 cfs. It was issued as a RAFN right with a 21-year planning horizon (2009-2030) based on data developed in 2008 by CH2M Hill (now known as Jacobs), J-U-B Engineers, and Taylor Planning. The relatively short planning horizon reflects the fact that the 2008 studies, which were the only ones available at the time, were focused in large part on infrastructure planning.

New water master plans were prepared for the City's potable and irrigation systems by Keller Associates in 2014. Those master plans included revised estimates of future water demands based on new data from COMPASS. The projections were for the years 2020, 2025, 2030, 2035, 2040, and for full build-out. The projections are set out as Attachments A and B to this letter. These projections were considerably lower than the 2008 projection, presumably due to the intervening Great Recession.

A table setting out each of the City's municipal water rights is set out in Attachment C. The total diversion authority is summarized in Table 1.

Table 1. Total Diversion Authority for City's Potable and Irrigation System Water Rights (including only decreed and licensed rights within the City's municipal delivery system)

System	Authorized Diversion Rate (cfs)
Rights originally associated with the potable delivery system	49.55
Rights originally associated with the irrigation delivery system	77.04
TOTAL	126.59

A comparison of the current diversion authority for potable system rights with the 2014 projection for the potable system demand shows a negative "gap" for each year through 2040. (There is a positive gap for full build-out, but the master plan does not include a projection of when full buildout will occur.) The gap analysis based on potable system demand is summarized in Table 2.

Table 2. Potable System Gap Analysis (based on projected peak hour demand)

Year	Projected Population	Projected Peak Hour Demand		Current Potable System Diversion Authority (cfs)	Gap (Demand minus Diversion Authority) (cfs)
		gpm	cfs		
2020	92,334	14,125	31	49.55	-18.08
2025	101,727	15,412	34		-15.21
2030	113,393	16,950	38		-11.78
2035	128,574	18,836	42		-7.58
2040	137,810	20,264	45		-4.40
Full Buildout	397,474	58,065	129		79.83

In sum, there is no basis to license the Permit based on a revised RAFN projection of potable system demand alone. Instead, as described in previous correspondence, the City seeks licensing based on combined potable and irrigation system demands.

As you know, the City historically developed its potable and non-potable water delivery systems separately. Accordingly, water rights were identified with one system or the other. This distinction is no longer valid. The systems have been interconnected at certain points and will become increasingly interconnected.

Currently the systems are interconnected at Well 14, which directly connects to both the potable and irrigation systems.¹ In addition, in 2016 or 2017, the City installed five interconnection points between the two distribution systems.² These are not installed at the well but are connections between pipelines of the two systems.³

The integration of these systems is necessary to meet peak irrigation demands when surface water is not available (due to seasonal curtailment during times of drought, emergencies such as a canal breach, and during the shoulder seasons before and after surface water availability). Without integration, it would be necessary for the City to construct many additional stand-alone irrigation wells at considerable expense.

As reflected in your letter of October 25, 2017, the City's Permit may be eligible for licensing as a RAFN right if proper documentation is provided.⁴ We provide that information below, in the same order as set out in your letter.

REQUESTED DOCUMENTATION

Revised description of the City's service area

As noted in your letter, Idaho Code § 42-217(4) requires the permit holder to submit "a revised description of the service area." Read in context with the other requirements in that subsection (a revised RAFN and a revised planning horizon), we understand this to be a requirement for a revised future service area, aka, a revised planning area. Moreover, the statute defines "service area" flexibly to include areas outside of the city limits.⁵

¹ This is documented with respect to Well 14 in the Beneficial Use Field Report prepared by SPF and submitted to IDWR in 2008 in connection with Water Right No. 63-12591.

² Documentation of the interconnections was provided to IDWR in correspondence from Chris Meyer dated September 5, 2017. (See, in particular, the set of "Irrigation Cross Connection" drawings prepared by Keller Associates dated January 2015.)

³ These interconnections are installed each year during the irrigation season. For maintenance reasons involving backflow protection, they are removed during the non-irrigation season and reinstalled the next year.

⁴ In your letter of October 25, 2017, you acknowledge the City's position that "its construction of the well to distribute water through established trunk lines is consistent with the guidance articulated in Application Processing Memorandum No. 74, authored by Mat Weaver." You then conclude: "When it submitted its statement of completion, if the City already had constructed the new well and had the complete system already in place for distributing the water diverted from the well, and only lacked a physical connection of the two, the City's development probably meets the system capacity standard for establishing a RAFN right."

⁵ "The service area for a municipality may also include areas outside its corporate limits, or other recognized boundaries, that are within the municipality's established planning area if the constructed delivery system for the area shares a common water distribution system with lands located within the corporate limits." Idaho Code § 42-202B(9).

Accordingly, the City's revised description of its service area corresponds to its current area of city impact ("impact area"). This includes both the area that is now within the city limits and the area that the City anticipates annexing and providing services. The City's area of impact has been approved by Canyon County.

Attachment D includes a map showing the current impact area. Attachment D also includes a copy of City Ordinance No. 4278, which describes the impact area. In addition, SPF will provide a GIS shapefile of the City's future service area (i.e., current impact area) to you via email.

Revised planning horizon

Idaho Code § 42-217(4) also requires the permit holder to submit "a revised planning horizon." As noted, the Permit was issued on the basis of a 21-year planning horizon for the years 2009-2030, and the Keller master plans contain demand projections through the year 2040. The City will undertake longer-term water demand studies at approximate 5-year intervals as part of its ongoing water master planning process.

Accordingly, the City's revised planning horizon corresponds to the Keller master plans—a total of 22 years (from now through December 31, 2040).

IDWR's guidance on RAFN rights⁶ states that, at the time of licensing, the "planning horizon can only be amended downward to reflect a revised lowered future water demand." (RAFN Guidance at 20). That does not appear to be consistent with the statute, which provides simply that the applicant shall provide a revised planning horizon. We do not perceive that extending the duration of the planning horizon constitutes an enlargement so long as the quantity stated in the permit is not increased, particularly given that the statute expressly contemplated a "revised planning horizon" at the time of licensing.

It is not necessary to resolve this here. The City would prefer that the Department recognize the City's 2040 planning horizon as reflected in its most recent planning. But if the Department does not wish to extend the planning horizon, a RAFN license may still be justified based on the current planning horizon ending on December 31, 2030. As shown in Table 4 below, there is a positive "gap" in 2030 as well as 2040.

⁶ Mat Weaver, *Memorandum – Application Processing No. 74, Permit Processing No. 20, License Processing No. 13, Transfer Processing No. 29*, at 5 (Mar. 16, 2015) (replacing Nov. 15, 2014 and Nov. 13, 2013 versions) ("RAFN Guidance").

Revised estimate of reasonably anticipated future needs, including a gap analysis

Our revised forecast of RAFN is based on information found in the two planning documents prepared for the City by Keller in 2014 (for its potable and irrigation systems). As noted above, excerpts of the master plans containing these tables are reproduced in Attachments A and B to this letter. The demand forecast for potable use is found in Table 5.4 on page 5-8 of Keller's "Water System Master Plan". The demand forecast for non-potable use is found in Table 5.4 on page 5-6 of Keller's "Irrigation Master Plan".

The total future demand for the Permit's planning horizon are summarized in Table 3. This table shows only anticipated water demands (in gpm from the Keller master plans, converted to cfs). The corresponding revised population projections are the same as those set out in Table 2.

Table 3. System-wide Future Water Demand (combined potable and irrigation)

Demand	2030				2040			
	Peak Day		Peak Hour		Peak Day		Peak Hour	
	gpm	cfs	gpm	cfs	gpm	cfs	gpm	cfs
Potable	13,039	29	16,950	38	15,588	35	20,264	45
Irrigation	70,549	157	94,393	210	85,660	191	114,610	255
TOTAL	83,588	186	111,343	248	101,248	226	134,874	301

Comparing revised future demand (Table 3) to the revised portfolio of water rights (Table 1) leads to the revised gap analysis presented in Table 4.

Table 4. Revised Gap Analysis (combined potable and irrigation)

Gap	2030	2040
Based on Peak Day Demand		
Total Projected Demand	186	226
Current Integrated System Diversion Authority	126.59	126.59
Difference	59.41	99.41
Based on Peak Hour Demand		
Total Projected Demand	248	301
Current Integrated System Diversion Authority	126.59	126.59
Difference	121.41	174.41

Four "gaps" are displayed (peak day vs. peak hour and 2030 vs. 2040). Each of them shows a substantial shortfall between the City's current water rights and projected future demands.

Reinstatement of Permit

At the time the Statement of Completion was submitted in 2015, the City's consultant believed the Permit (although issued for RAFN) could be licensed as a non-RAFN water right (with no increment of additional diversion rate). The Department determined the Permit could not be licensed for non-RAFN use, thus making the Statement of Completion insufficient for the RAFN Permit and the Permit subsequently lapsed in 2017.

Since the lapsing of the Permit in 2017, the City and its attorney and consultants have met with IDWR and diligently worked to determine the best water right strategy for the City and to document the information needed to proceed with licensing the RAFN Permit. The City respectfully requests reinstatement of the Permit based upon submittal of the information set out above and in the Attachments, together with the enclosed Beneficial Use Field Report (Attachment E). We also enclose on behalf of the City the \$250.00 reinstatement fee.

Best Regards,



Roxanne Brown
Sr. Water Rights Specialist

CC: Michael Fuss, Director, Public Works Department
Nate Runyan, Deputy Director, Public Works Department
Chris Meyer, Water Counsel

Attachments A through E

SPF Job No. 270.0400

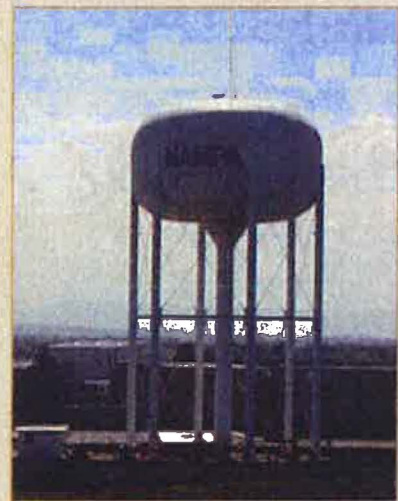
Attachment A

**Keller Associates – Water System Master Plan
(Excerpt: Demand Forecast)**

City of Nampa, Idaho

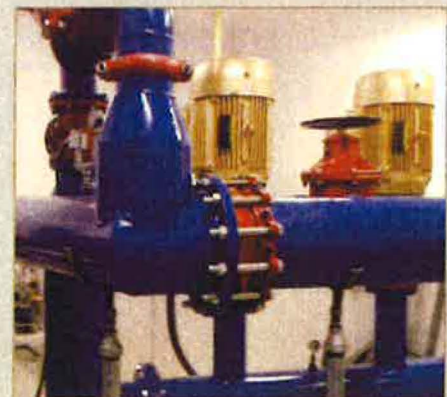


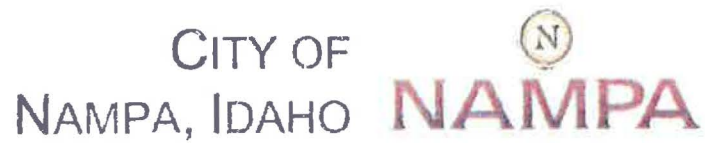
Water System Master Plan



KELLER
associates

September 2014
Final





Water System Master Plan

APPROVED
By: Carol Carver, P.E.
IDAHO DEQ
Boise Regional Office
Date: 9/22/2014



KELLER
associates

Keller Associates
131 SW 5th Avenue, Suite A
Meridian, Idaho 83642

213051/3/13-345



Signed by:
James Bledsoe, P.E.
Project Manager

Table 5.4: Water Demand Forecast

	Population	Jobs	ADD (gpm)					MDD (gpm)						
			Zone 1	Zone 2	Zone 3	Zone 4 ^a	Total	Zone 1	Zone 2	Zone 3	Zone 4 ^a	Total	Zone 1	Zone 2
2012 Design	82,160	30,893	0	4,148	792	24	4,964	0	6,886	1,314	40.4	8,240	0	8,9
2020^b	92,334	37,390	155	4,901	1,459	31	6,545	257	8,135	2,422	51.6	10,865	334	10,
2025	101,727	42,630	164	5,293	1,646	38	7,142	273	8,787	2,733	63.1	11,856	355	11,
2030	113,393	48,457	177	5,754	1,877	47	7,855	293	9,551	3,116	77.9	13,039	381	12,
2035	128,574	54,758	191	6,328	2,154	56	8,729	317	10,505	3,575	93.0	14,490	412	13,
2040	137,810	61,712	200	6,727	2,400	64	9,390	331	11,167	3,984	105.8	15,588	431	14,
Buildout	397,474	231,099	363	16,850	9,005	688	26,907	603	27,971	14,948	1,143	44,665	784	36,

^aZone 4 includes only the area directly serviced by Belmont

New Residential ADD =

58

gpcd (includes 7% waterloss)

MDD/A

^bAdded two new 450 gpm industrial demands for 2020

New Commercial ADD =

60

gpjd (includes 7% waterloss)

PHD/M

Attachment B

Keller Associates – Irrigation Master Plan (Excerpt: Demand Forecast)

*City of Nampa,
Idaho*



Irrigation Master Plan



KELLER
associates

May 2014 – Final





Irrigation Master Plan



KELLER
associates

Keller Associates
131 SW 5th Avenue, Suite A
Meridian, Idaho 83642

213051/4/14-110



Signed by:
James Bledsoe, P.E.
Project Manager

5.5 DISTRIBUTION OF DEMANDS

The City of Nampa's GIS system includes a database of lands that are irrigated with the City's pressure irrigation system. Figure 3 in Appendix A illustrates the location and distribution of these parcels. According to City GIS staff, approximately 95% of the parcels receiving pressure irrigation service are accounted for in the GIS. Existing demands were distributed to these parcels based on the assumptions in Table 5.3. The shading in each parcel showing in Figure 3 reflects the portion of land that is irrigable. For developed commercial areas, the portion is small, while larger residential developments and large green spaces are much higher.

5.6 WATER DEMAND FORECAST

Demands were forecasted using available Compass data. Populations, numbers of housing units, and the number of jobs per acre were determined using Compass projections for TAZs in the planning area, and are summarized in Table 5.4. These projected Compass values were then joined with City future land development plans to assign jobs to commercial areas and housing units and populations to residential zones. Irrigated acreage was estimated for each TAZ. Current demands were based on production and irrigated acreage, while future demands developed irrigated acreage based on increases in population and jobs.

Table 5.4: Demand Forecast

Year	Population	Jobs	Irrigated Acres	Average Season Demand (gpm)	Max Month (gpm)	Max Week (gpm)	Max Day (gpm)	Max Hour (gpm)
Current	82,160	30,893	4,225	30,675	43,884	47,322	51,929	69,480
2020	92,334	37,390	4,877	35,409	50,657	54,625	59,943	80,202
2025	101,727	42,630	5,288	38,394	54,927	59,230	64,996	86,963
2030	113,393	48,457	5,740	41,674	59,619	64,290	70,549	94,393
2035	128,574	54,758	6,289	45,666	65,330	70,449	77,307	103,435
2040	137,810	61,712	6,970	50,600	72,389	78,060	85,660	114,610
Buildout	397,474	231,099	19,494	141,525	202,468	218,329	239,585	320,557

Attachment C

Table of Municipal Water Rights - Potable and Irrigation Systems (Including only decreed and licensed rights within the City's integrated municipal delivery systems)

City of Nampa
Summary of Current Water Rights

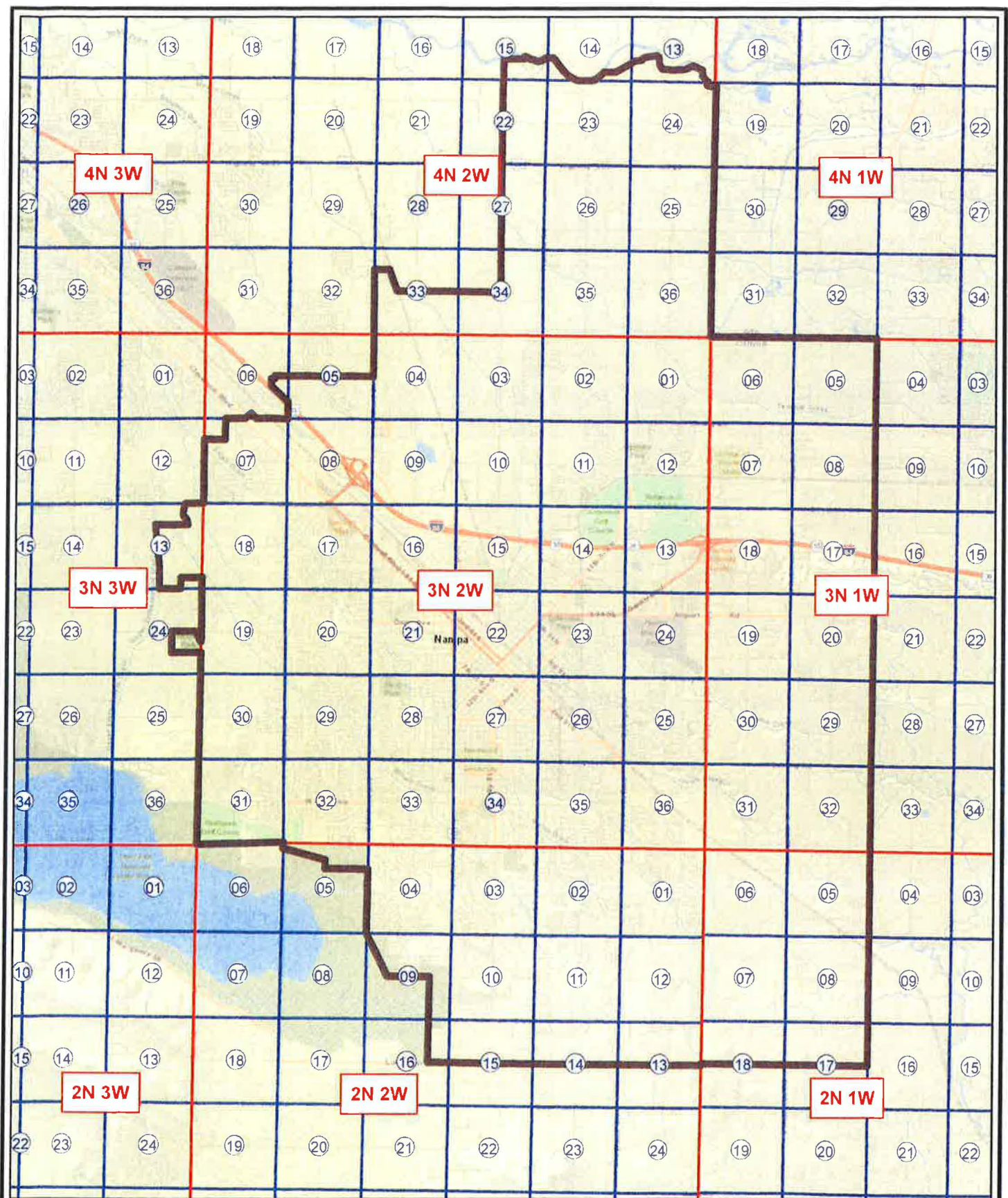
Water Right No.	Original Well	Authorized Diversion Rate (cfs)
63-02449	Mayor's	0.80
63-02450	Near Mayor's Well	1.00
63-02484	6th Street South	1.62
63-2779	3	2.00
63-02780	Lakeview	2.50
63-2781	4	3.00
63-2787	5th & Phyliss	30.00
	Kohler (aka Cemetery)	
	Sugar St. (aka E. Powerline)	
	19th Ave North	
	15th Ave North	
	14th Ave North/1st St.	
	Indian Creek	
	Meyer	
	Chestnut	
	Kurtz	
	Maple	
	Holly	
	Fern	
	19th South*	
	14th South	
	High St.	
	Hudson	
	4th St. South	
63-02943	Canyon	1.74
63-03257	Sierra Park	0.58
63-05257	13th Ave North	0.30
63-5258	6	2.10
63-07003	Birds Eye*	7.68
63-7567	8	2.79
63-07708	State Street	0.40
63-08312	Morgan	0.50

City of Nampa
Summary of Current Water Rights

Water Right No.	Original Well	Authorized Diversion Rate (cfs)
63-8324	9	3.00
63-08539	Midway Park	0.78
63-9180	10	4.00
63-09853	Grange Park	1.00
63-09889	Colorado	1.50
63-10211	Meadowbrook 1	7.71
	Boone Ave.	
	Venice	
	West Park	
	Sweetwood Circle	
	Winther Ave.	
	Young Ave.	
	Juniper Square	
63-10212	7	2.23
63-10319	Centennial golf course	2.05
63-11511	Karcher II	1.50
63-11729	12	2.68
63-11894	Augusta	0.51
63-12322	Pheasant Hollow	0.84
63-12463	17	3.00
63-12474	11	3.50
63-12506	15	3.50
63-12543	16	4.00
63-12591	14	3.50
63-28219	1,2	1.22
63-28220	5	1.93
63-31243	18	2.60
63-31504	Amity Ave.	3.73
63-31598	Karcher Interchange	0.20
63-31949	Vista Ridge	3.40
63-31961	Farm & City	1.46
63-32179	Farm & City	0.24
63-32337	Happy Valley	5.00
63-33022	16	4.50
AUTHORIZED DIVERSION RATE TOTAL		126.59

Attachment D

Future Service Area Description (Area of City Impact Map and Ordinance No. 4278_



Service Area Boundary

City of Nampa Municipal Service Area
 (as updated September 6, 2016
 by Ordinance No. 4278)



1

Miles



SPF WATER
 ENGINEERING



2016-037131

RECORDED

09/09/2016 02:42 PM



00253845201600371310060060

CHRIS YAMAMOTO

CANYON COUNTY RECORDER

Pgs=6 RGRAY

NO FEE

ORDINANCE

NAMPA PLANNING & ZONING

**Canyon County
Recorder's Office
Document
Cover Sheet**



**ORDINANCES OF THE CITY OF NAMPA
NOTICE OF ADOPTION AND SUMMARY OF
ORDINANCE NO. 4278**

AN ORDINANCE ENACTED BY THE NAMPA CITY COUNCIL AMENDING THE CITY OF NAMPA AREA OF CITY IMPACT BOUNDARY, REQUIRING ORDINANCE AND BOUNDARY MAP TO BE FILED IN THE OFFICE OF THE CITY CLERK; PROVIDING FOR AN EFFECTIVE DATE; PROVIDING FOR SEVERABILITY; AND REPEALING ALL ORDINANCES, RESOLUTIONS, ORDERS AND PARTS THEREOF, IN CONFLICT HEREWITH.

Section 1: Amends the Area of City Impact Map, with an exhibit that shows the new boundary.

Sections 2 through 5: Provides that the City Clerk shall keep the original ordinance and copy of the map on file; the ordinance shall be in full force and effect from and after its passage, approval and publication according to law; provides for severability; repeals conflicting ordinances, resolutions, and orders.

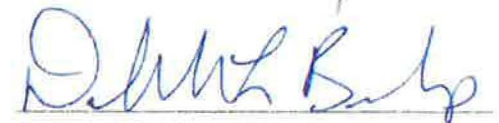
Ordinance No. 4278 provides an effective date, which shall be on the 13th day of September, 2016. Ordinance No. 4278 was passed by the Council and approved by the Mayor on the 6th day of September. The full text of the ordinance is available at Nampa City Hall, 411 Third Street South, Nampa, Idaho 83651. The Mayor and City Council approved the foregoing summary on this 6th day of September, 2016, for publication on this 13th day of September, 2016 pursuant to Idaho Code § 50-901A.





Mayor Robert L. Henry

Attest:



Deborah Bishop, City Clerk

STATEMENT OF LEGAL ADVISOR

I have reviewed the foregoing summary and believe that it provides a true and complete summary of Ordinance No. 4278 and provides adequate notice to the public as to the contents of such ordinance.

DATED this 6th day of September, 2016. 
Mark Hilty, Attorney for City of Nampa

ORDINANCE NO. 4278

AN ORDINANCE ADOPTING THE AREA OF IMPACT MAP PURSUANT TO IDAHO CODE SECTION 67-6526; REPEALING ALL ORDINANCES, RESOLUTIONS, ORDERS, AND PARTS THEREOF IN CONFLICT HEREWITH.

WHEREAS, the Nampa Planning & Zoning Commission held a public hearing on March 22, 2016 concerning the adoption of an amended Area of City Impact Map and recommended to the Mayor and City Council that the City of Nampa adopt an amended map; and

WHEREAS, the Canyon County Planning and Zoning Commission held a public hearing on April 21, 2016 concerning the adoption of an amended Area of City Impact Map and recommended that the Canyon County Board of Commissioners adopt an amended Area of City Impact map for Nampa; and

WHEREAS, the Nampa City Council held public hearings on May 16, 2016 and July 18, 2016 concerning the adoption of an amended Area of City Impact Map and considered the recommendation of the Planning and Zoning Commission and public comment as was presented; and

WHEREAS, the Canyon County Board of Commission held a public hearing on August 25, 2016 concerning the adoption of an amended Area of City Impact Map and considered the recommendation of the Planning and Zoning Commission and City Council and public comment as was presented.

NOW THEREFORE, BE IT ORDAINED by the Mayor and City Council of the City of Nampa, Idaho:

Section 1: That the Nampa City Area of City Impact Map attached hereto as Exhibit "A" and incorporated herein by this reference as set forth in full, is hereby adopted and approved pursuant to Idaho Code § 67-6526.

Section 2: The City Clerk shall keep the original of the Ordinance with a copy of the map attached on file in the office of the City Clerk.

Section 3: This ordinance shall be in full force and effect from and after its passage, approval, and publication, according to law.

Section 4: This ordinance is hereby declared to be severable. If any portion of this ordinance is declared invalid by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect and shall be read to carry out the purposes of the ordinance before the declaration of partial invalidity.

Section 5: All ordinances, resolutions, orders and parts thereof in conflict herewith are repealed.

PASSED BY THE COUNCIL OF THE CITY OF NAMPA, IDAHO, THIS 6TH DAY OF SEPTEMBER, 2016.

APPROVED BY THE MAYOR OF THE CITY OF NAMPA, IDAHO, THIS 6TH DAY OF SEPTEMBER, 2016.

Approved:



Mayor Robert L. Henry

Attest:



City Clerk (or Deputy)

State of Idaho)

Canyon County)

On this 6th day of September, 2016, before me, the undersigned, a Notary Public in and for said State, personally appeared Robert L. Henry and Deborah L. Bishop known to be the Mayor and City Clerk of the City of Nampa, Idaho, a municipal corporation, who executed the foregoing instrument.

In Witness Whereof, I have hereunto set my hand and affixed by official seal, the day and year in this certificate first above written.

Patricia Rose

Patricia Rose

Residing at: Nampa, Canyon County, Idaho

My Commission Expires: 09/01/2022

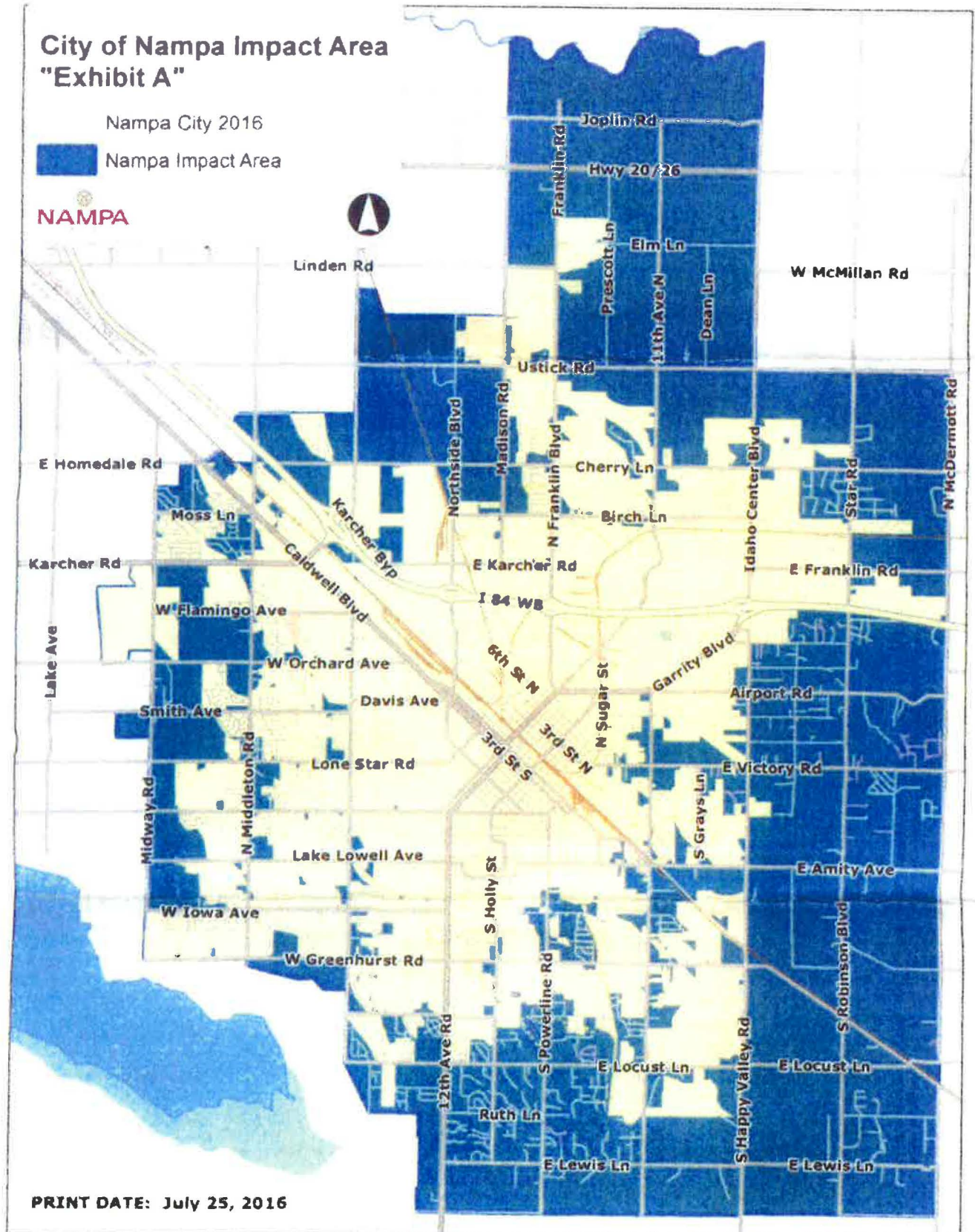


City of Nampa Impact Area "Exhibit A"

Nampa City 2016

 Nampa Impact Area

 **NAMPA**



PRINT DATE: July 25, 2016

Attachment E

Beneficial Use Field Report

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED

JUN 15 2018

DEPARTMENT OF
WATER RESOURCES

A Beneficial Use Field Report is prepared by a water right examiner as the result of an examination to clearly confirm and establish the extent of the beneficial use of water established in connection with a permit during the development period authorized by the permit and any extensions of time previously approved.

A. GENERAL INFORMATIONPermit No. 63-328351. Owner City of NampaPhone No. (208) 468-5420Current address 411 3rd St. S., Nampa, ID 836512. Examiner's name Marci S. Pape, P.E. (Examiner 15-142)EXAM DATE 04/05/20163. Accompanied by Shane WendlerEmail Wendlers@cityofnampa.usAddress Nampa City Water Works, 24 1st St. S., Nampa, ID 83651Relationship to permit holder Lead Distribution OperatorPhone No. (208) 249-41574. Source Ground Water

tributary to _____

B. OVERLAP REVIEW1. Other water rights with the same place of use See attached remarks2. Other water rights with the same source and point of diversion None**C. DIVERSION AND DELIVERY SYSTEM**

1. Point(s) of Diversion:

Ident. No.	Gov't Lot	¼	¼	¼	Sec	Twp	Rge	County	Method of Determination/Remarks
		SW	SW	NE	34	4N	2W	Canyon	Exam, 2015 GIS Photo

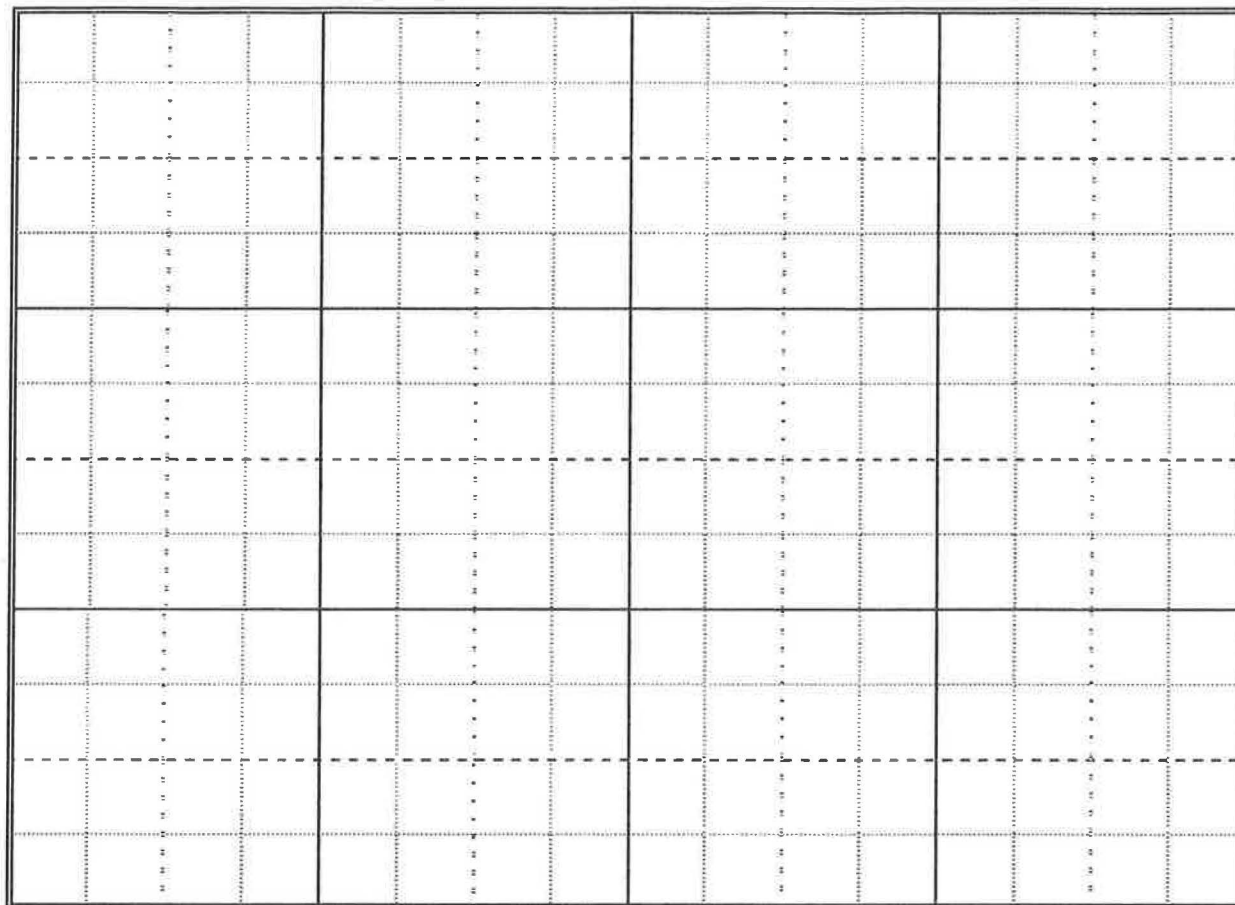
2. Place(s) of Use:

Method of determination * See below

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	

*Place of use is within the service area of the permittee's municipal water supply system as provided for under Idaho law.

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☐ see attached.



Scale: 1" = _____

- ☒ Copy of USGS Quadrangle attached showing location(s) of point(s) of diversion and place(s) of use (**required**)
☒ Aerial photo attached (required for irrigation of 10+ acres)
☒ Photo of diversion and system attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Well No. 20	GE	200	33104256	Peerless 14HXB,	10-inch; 150-foot setting
				6-stage	

*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	ABB War-	*	*	8-inch	
		minster				

2. **Measurements:** _____

Examiner measured rates between 4.7 and 5.1 cfs, with an average rate of 4.94 cfs from the Section 34 well. The two Section 1 wells listed on the permit were not developed.

This image shows a full page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

[illegible]

F. FLOW CALCULATIONS☐ Additional computation sheets attached

Measured Method:

See Section D.2. referencing flow determinations

Examiner measured 4.94 cfs for the Section 34 well.

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		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Municipal	1/1	12/31	4.94	
Totals:			4.94	

2. Recommended Amendments

☐ Change P.D. as reflected on page 1☐ Add P.D. as reflected on page 1☐ None☐ Change P.U. as reflected on page 1☐ Add P.U. as reflected on page 1☐ Other (additional condition of approval)**I. AUTHENTICATION**

Field Examiner's Signature

Marci S. PopeDate 6/15/2018

Reviewer _____

Date _____



B.1 OTHER WATER RIGHTS WITH SAME PLACE OF USE

63-2449	63-10212
63-2450	63-10319
63-2484	63-11511
63-2779	63-11729
63-2780	63-11894
63-2781	63-12322
63-2787	63-12463
63-2943	63-12474
63-3257	63-12506
63-5257	63-12543
63-5258	63-12591
63-7003	63-28219
63-7567	63-28220
63-7708	63-31243
63-8312	63-31504
63-8324	63-31598
63-8539	63-31949
63-9180	63-31961
63-9853	63-32179
63-9889	63-32337
63-10211	63-33022

E. NARRATIVE/REMARKS/COMMENTS

The original permit and the amended permit both included three separate points of diversion, but only one of the three sites were developed as a water source. This water right is recommended with a single point of diversion, as described above.

A 200-hp variable-speed line-shaft turbine well pump is installed in a 10-inch diameter well also known as Well 20. The well and pump supply water for use within the City of Nampa's potable and non-potable municipal systems. The examiner observed a pump capacity of approximately 2,217 gpm (4.94 cfs). (See Attachments F and G for flow measurement records and photos.) The well is completed to a depth of 333 feet, with 17.4-inch O.D. PVC casing to 270 feet and stainless-steel well screen from 243 to 333 feet.

Permit 63-32835 was approved for the diversion of 5.00 cfs (2,244 gpm) for municipal use. Test pumping was performed on September 19, 2014 by Riverside Inc., with oversight by SPF Water Engineering (see Attachment C). Test pumping was constrained by lack of drainage ditch capacity for water disposal, but it is likely that the well is capable of producing yields between 3,000 to 4,000 gpm. The maximum pumping rate during testing was 2,250 gpm with a pumping water level of approximately 92 feet. The projected pumping water level under sustained pumping conditions was 106 feet at 2,250 gpm, with a recommended pump setting of 150 feet.

Additional information to support licensing of Permit 63-32835 for the reasonably anticipated future needs of the City of Nampa can be found in the letter dated June 14, 2018 to which this beneficial use field report is attached.

Exam Attachment A: Permit records and Proof of Beneficial Use

Exam Attachment B: Topographic map and aerial photos

Exam Attachment C: Well Driller's Report, well test data, and pump curve

Exam Attachment D: Photos of the diversion works

Exam Attachment E: Flow Measurement Records

EXAM ATTACHMENT A

PERMIT RECORD AND PROOF OF BENEFICIAL USE

State of Idaho
Department of Water Resources
Amendment of Permit

NO. 63-32835

Priority: August 18, 2007

Maximum Diversion Rate: 5.00 CFS

Right Holder: CITY OF NAMPA
411 3RD ST S
NAMPA ID 83651

Source: GROUND WATER

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>RATE OF DIVERSION</u>
MUNICIPAL	01/01 to 12/31	5.00 CFS

LOCATION OF POINT(S) OF DIVERSION:

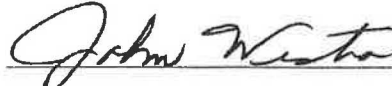
GROUND WATER	SW1/4SW1/4	Sec. 1, Twp 03N, Rge 02W, B.M. CANYON County
GROUND WATER	SW1/4SW1/4	Sec. 1, Twp 03N, Rge 02W, B.M. CANYON County
GROUND WATER	SW1/4SW1/4NE1/4	Sec. 34, Twp 04N, Rge 02W, B.M. CANYON County

LOCATION OF PLACE OF USE: See conditions of approval #3 and #4

CONDITIONS OF APPROVAL

1. Proof of application of water to beneficial use shall be submitted on or before **October 01, 2014**.
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. 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.
6. This right does not grant any right-of-way or easement across the land of another.
7. Right holder shall comply with the drilling permit requirements of Section 42-235, Idaho Code and applicable Well Construction Rules of the Department.
8. This right authorizes the diversion and use of 5.0 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.
9. 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.
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.

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 December, 2013.


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

C. L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

December 9, 2013

CITY OF NAMPA
411 3RD ST S
NAMPA ID 83651

RE: Permit No.63-32835

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.

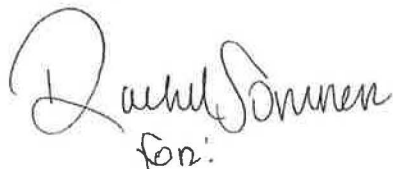
Enclosed is a form entitled 'Instructions for Proof of Beneficial Use.' Please read the instructions carefully since you must take further action to develop this permit into a licensed water right. Also enclosed is a form entitled 'Proof of Beneficial Use.' If your project is already completed, you should complete and submit this form immediately.

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,

A handwritten signature in cursive script that reads "Rachel Sommer". Below the signature, the word "for:" is written in a smaller, less legible cursive script.

John Westra
Western Regional Manager

Enclosures

CERTIFICATE OF SERVICE

I hereby certify that on December 9, 2013 I mailed a true and correct copy, postage prepaid, of the foregoing PRELIMINARY ORDER(Approved Permit) with a Map showing the Municipal Place of Use of Boundary to the persons listed below:

RE: WATER RIGHT NO.

63-32835

**CITY OF NAMPA
411 3RD ST S
NAMPA ID 83651**

**GIVENS PURSLEY LLP
ATTN: CHRISTOPHER H MEYER
601 W BANNOCK ST
PO BOX 2720
BOISE ID 83701**

**SPF WATER ENGINEERING LLC
ATTN: LORI GRAVES
300 E MALLARD DR STE 350
BOISE ID 83706**

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

**Rachel Sommer
Administrative Assistant I**

RECEIVED

SEP 28 2015

WATER RESOURCES
WESTERN REGION

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
STATEMENT OF COMPLETION
FOR SUBMITTING PROOF OF BENEFICIAL USE

RECEIVED

OCT 01 2015

FOR OFFICE USE ONLY
Amt. of Fee \$: 200.00
Receipt No. W043555
Receipt By: RN
Date Received: 9/28/15

The Idaho Department of Water Resources considers this form a statement by the permit holder(s) that development of a water right has been **completed** and that water has been applied to beneficial use to the extent described below. **This form must be accompanied by an examination fee, when necessary, or by a completed Beneficial Use Field Report prepared by a certified water right examiner.** Please refer to the instructions and fee schedule for this form. If ownership of the permit has changed, please contact any Department office or visit the Department's website at: www.idwr.idaho.gov for an *Assignment of Permit* form. If you wish to relinquish your permit because you have not established the authorized use of the water and are not applying for an extension, please notify the Department in writing.

1. Permit No.: 63-32835 Telephone No.: (208) 468-5420

2. Name of Permit Holder(s): City of Nampa

3. Mailing Address: 411 3rd St. S. City: Nampa

State: ID Zip: 83651 Email: _____

4. Source of Water: groundwater If **GROUND WATER** (well), Date Drilled: mo. 9 / yr. 2014

Well Driller: Riverside Inc. Drilling Permit Number: 966432-872491

5. Extent of use(s) completed (as authorized by the water right permit):

Domestic (No. of households): _____ Stockwater (No. and type of stock): _____

Irrigation (No. of acres): _____ Other: municipal use in the City of Nampa service area

6. Total rate of diversion or storage volume for which proof is submitted: 5.00 cfs OR _____ acre-feet.

7. Compliance with a measuring device requirement, lockable controlling device requirement, and/or other conditions of permit: **Refer to the approval conditions on your permit and respond accordingly. The Department will not issue a license if permit conditions are not met.**

Measuring Device: Is a measuring device required?

Yes ☐ No ☒
Yes ☐ No ☐

If yes, has the measuring device been installed?

Lockable Controlling Device: Is a lockable device required to control the diversion?

Yes ☐ No ☒
Yes ☐ No ☐

If yes, has the lockable device been installed?

Other Conditions of Permit: Do the approval conditions on your permit require you to submit additional information in connection with your proof of beneficial use? If yes, list the conditions below and attach documents with the required information.

None required. Completed? Yes ☐ No ☐

8. Fee Enclosed: \$ 200.00 See fee schedule on back of the instructions for filing proof of beneficial use.

Proofs filed without an appropriate fee, will be considered incomplete.

9. Person to contact to accompany the Department representative during field examination of the water system.

Name: Nate Runyan, P.E. Telephone Number: (208) 468-4493

Mailing Address: 340 W. Railroad St. City: Nampa

State: ID Zip: 83687 Email: _____

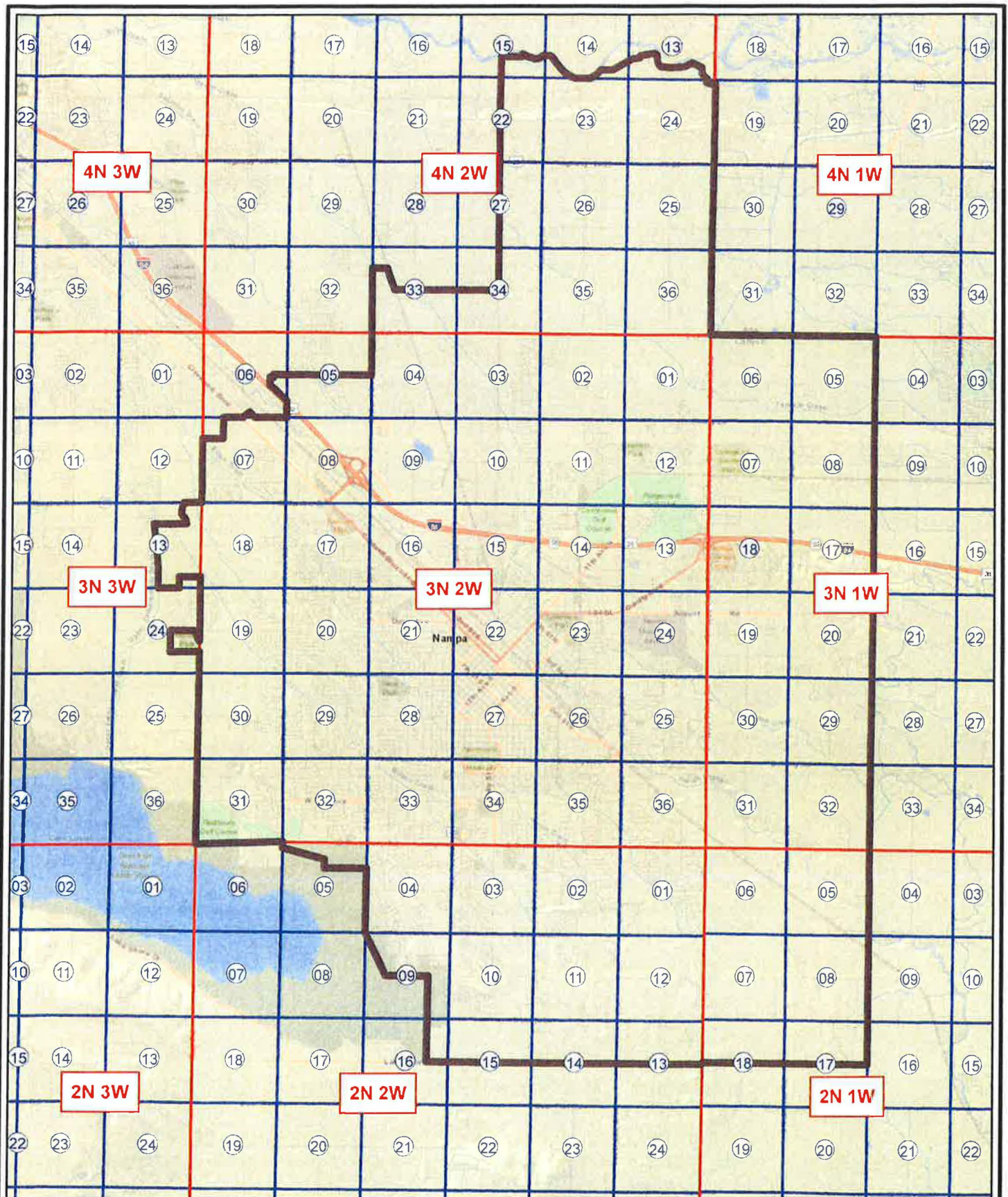
The information given on this form is my true statement of the extent to which the above numbered permit has been developed and water has been diverted and applied to a beneficial use. I understand that any undeveloped portion of the permit is relinquished to the State of Idaho.

Signature of permit holder: [Signature] Date: 9/22/15
(Include your title, if on behalf of company or organization)

Mail to: Idaho Department of Water Resources, PO Box 83720, Boise, ID 83720-0098

EXAM ATTACHMENT B

TOPO MAP & 2015 AERIAL PHOTO



City of Nampa Municipal Service Area
(as updated September 6, 2016
by Ordinance No. 4278)

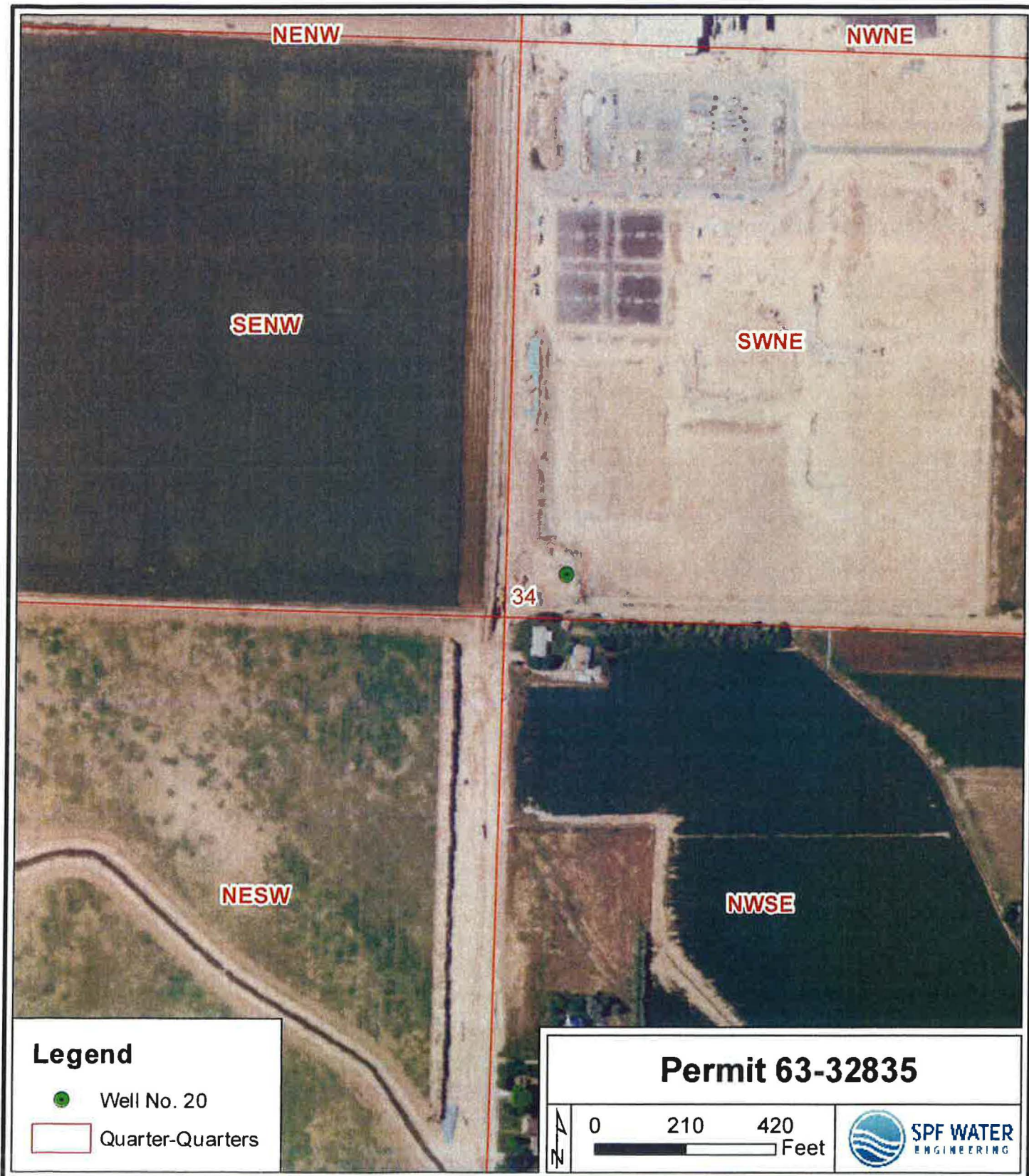


1

Miles



SPF WATER
ENGINEERING



Legend

● Well No. 20

□ Quarter-Quarters

Permit 63-32835



0 210 420
Feet



SPF WATER
ENGINEERING

EXAM ATTACHMENT C

**WELL DRILLER'S REPORT, WELL TEST DATA, AND PUMP
CURVE**

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

1. WELL TAG NO. D 0067289
Drilling Permit No. 966432 - 872491
Water right or injection well # 63-32835

2. OWNER: City of Nampa Public Works Department Well#20
Name _____
Address 411 3rd St. South
City Nampa State ID Zip 83651

3. WELL LOCATION:

Twp. 04 North ☒ or South ☐ Rge. 02 East ☐ or West ☒
Sec. 34 SW 1/4 SW 1/4 NE 1/4

Gov't Lot _____ County Canyon
Lat. 43 ° 38.500 (Deg. and Decimal minutes)
Long. 116 ° 33.767 (Deg. and Decimal minutes)
Address of Well Site East of Madison Road, between Linden
and Ustick Roads City Nampa
(Give at least name of road + Distance to Road or Landmark)
Lot. _____ Blk. _____ Sub. Name _____

4. USE:

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

5. TYPE OF WORK:

☒ New well ☐ Replacement well ☐ Modify existing well
☐ Abandonment ☐ Other _____

6. DRILL METHOD:

☐ Air Rotary ☐ Mud Rotary ☐ Cable ☒ Other Reverse Rotary

7. SEALING PROCEDURES:

Seal material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method/procedure
3/4" Bentonite	0	69	17,500 lbs	Dry pour
Cement/Bent	0	270	405 ft ³	Trimie pipe/pumped

8. CASING/LINER:

Diameter (nominal)	From (ft)	To (ft)	Gauge/Schedule	Material	Casing	Liner	Threaded	Welded
24	+3	69	.375	Steel	☒	☐	☐	☒
17.4	+3	270	1.024	PVC	☒	☐	☐	☐
8	242	243	.25	Stainless	☐	☒	☐	☐
					☐	☐	☐	☐

Was drive shoe used? ☐ Y ☒ N Shoe Depth(s) _____

9. PERFORATIONS/SCREENS:

Perforations ☐ Y ☒ N Method _____
Manufactured screen ☒ Y ☐ N Type Tight wrap / wire wrap
Method of installation Lower in

From (ft)	To (ft)	Slot size	Number/ft	Diameter (nominal)	Material	Gauge or Schedule
243	248	.030		8	S.S.	
248	273	.005		8	S.S.	Tight wrap
273	333	.030		8	S.S.	

Length of Headpipe _____ Length of Tailpipe _____
Packer ☒ Y ☐ N Type Johnson K Packer

10. FILTER PACK:

Filter Material	From (ft)	To (ft)	Quantity (lbs or ft ³)	Placement method
#8-12 Sand	244	333	7,500	Dry pour

11. FLOWING ARTESIAN:

Flowing Artesian? ☐ Y ☒ N Artesian Pressure (PSIG) _____
Describe control device _____

12. STATIC WATER LEVEL and WELL TESTS:

Depth first water encountered (ft) 16' Static water level (ft) 16'
Water temp. (°F) 62° Bottom hole temp. (°F) _____
Describe access port Lid with 2" plug

Well test:

Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)	Pump	Bailer	Air	Flowing artesian
36	1200	408	☒	☐	☐	☐
			☐	☐	☐	☐

Test method:

Water quality test or comments: _____

13. LITHOLOGIC LOG and/or repairs or abandonment:

Bore Dia. (in)	From (ft)	To (ft)	Remarks, lithology or description of repairs or abandonment, water temp.	Water	
				Y	N
28	0	7	Top soil		X
28	7	9	Brown caliche		X
28	9	48	Brown sand, river cobbles		X
28	48	68	Coarse brown sand	X	
28	68	69	Brown clay		X
23	69	80	Brown clay		X
23	80	82	Fine-coarse brown sand	X	
23	82	91	Brown clay		X
23	91	110	Fine-coarse brown sand	X	
23	110	119	Brown clay		X
23	119	121	Fine-medium brown sand	X	
23	121	129	Brown clay		X
23	129	131	Fine-medium brown sand	X	
23	131	133	Brown clay		X
23	133	145	Fine-medium brown sand	X	
23	145	157	Brown clay		X
23	157	159	Fine-medium brown sand	X	
23	159	178	Brown clay		X
23	178	200	Med-coarse brn sand w/pea gravel	X	
23	200	208	Brown clay		X
23	208	244	Fine-coarse brown sand	X	
23	244	250	Coarse brn sand w/brn clay steaks	X	X
23	250	266	Brown clay		X
23	266	268	Fine brown sand	X	
15	268	274	Brown clay		X
15	274	298	Fine-medium brown sand	X	
15	298	307	Brown clay		X
15	307	334	Fine-coarse brown sand, clay	X	X
NOTE At 233' 15.25"x12" K Packer with 4'					
of 12" .25 wall SS pipe reduced at					
239' to 8" SS w/ swedge on bottom					
to 242'. Removable packer assembly					

Completed Depth (Measurable): 333

Date Started: Jul 24, 2014 Date Completed: Sep 19, 2014

14. DRILLER'S CERTIFICATION:

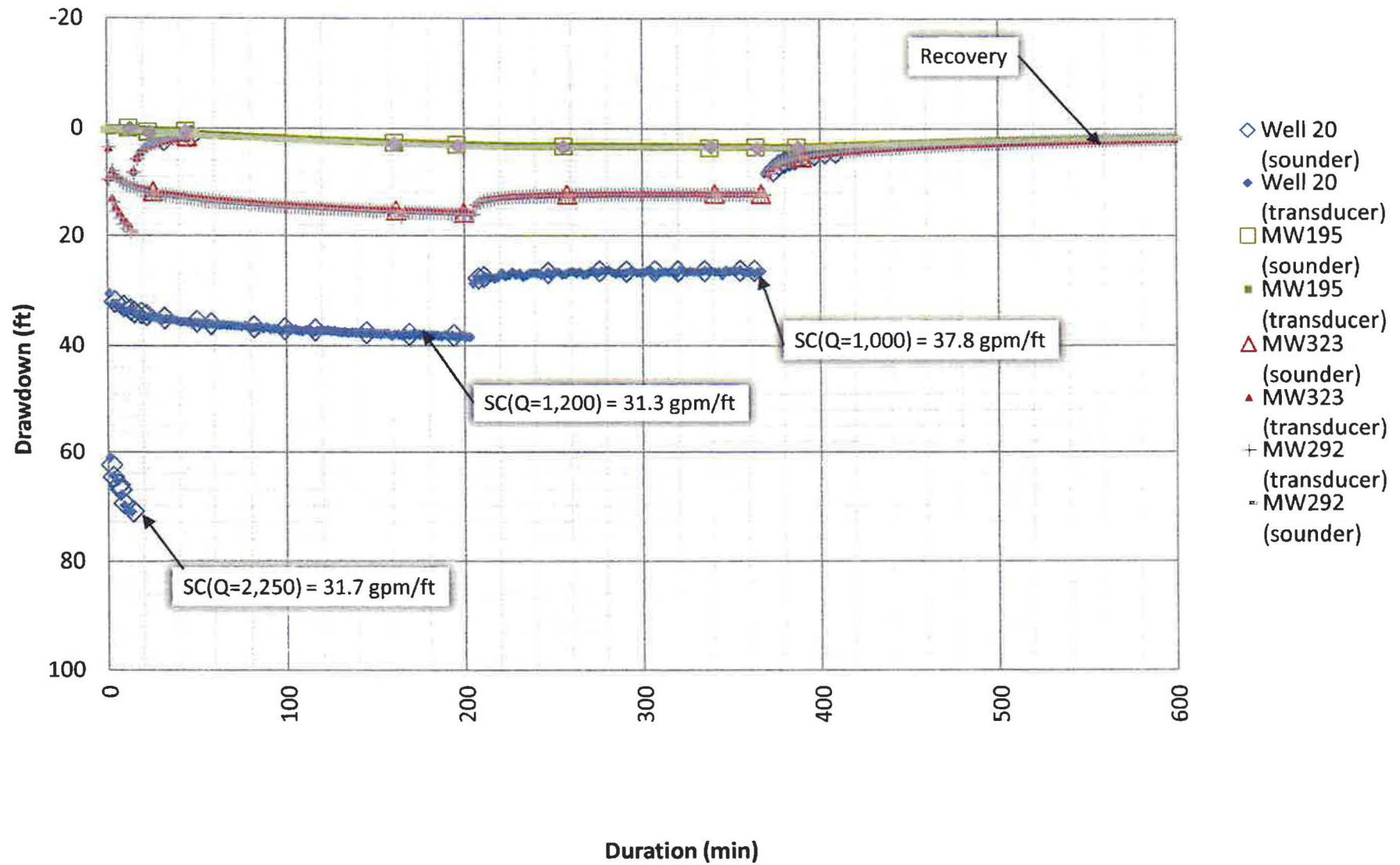
I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name Riverside Inc Co. No. 333
*Principal Driller _____ Date 10/13/14
*Driller _____ Date 10/13/14
*Operator II _____ Date _____
Operator I _____ Date _____

* Signature of Principal Driller and rig operator are required.

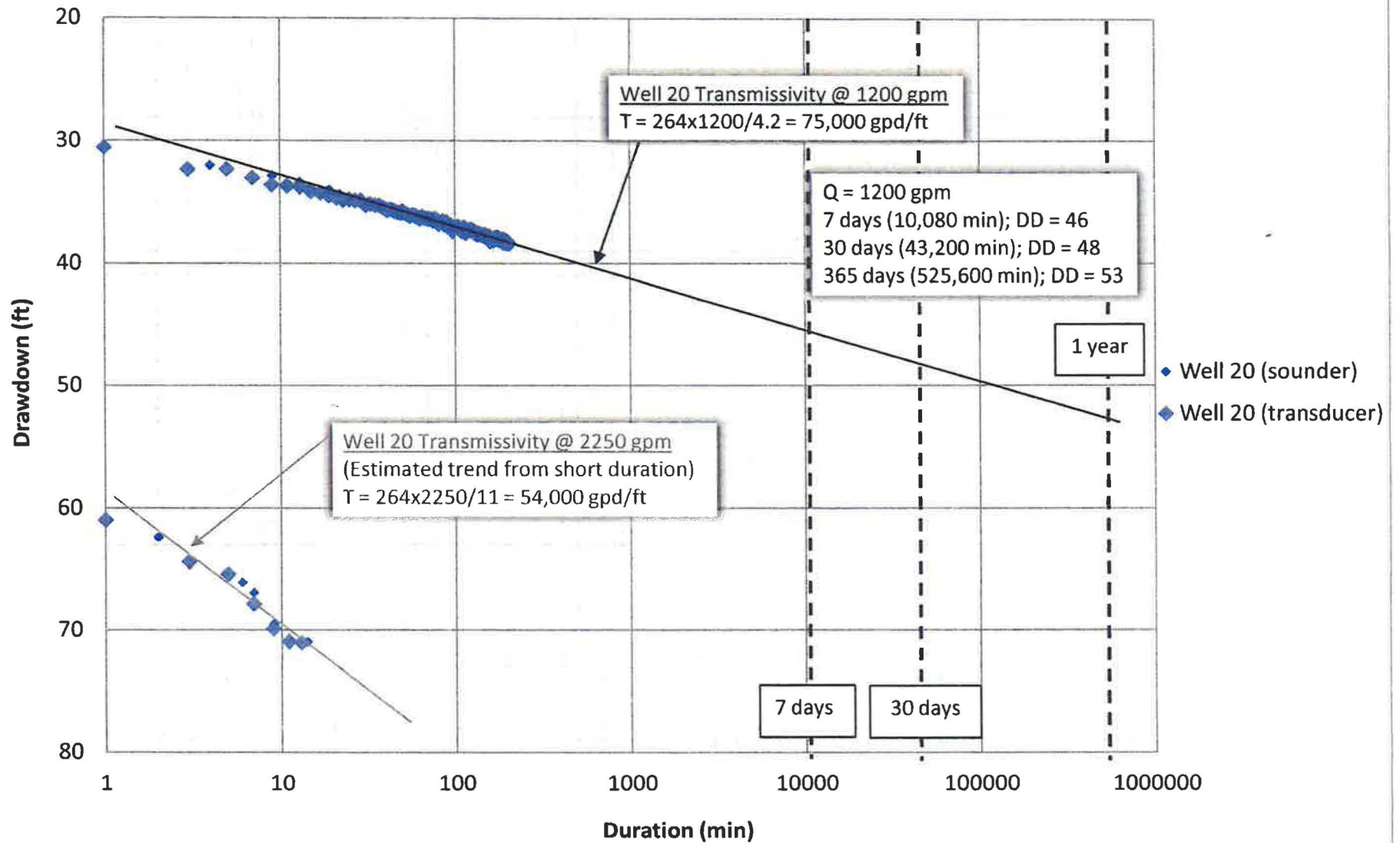
RECEIVED
OCT 16 2014

Nampa Production Well 20 Arithmetic Drawdown and Recovery September 19, 2014



Nampa Production Well 20 Pumping Test Semi-Log Drawdown

9/19/14





Customer : Irminger Construction
3473 N Brookside Ln
Boise, Idaho
83714

Robertson Supply , Inc
318 6th St., Nampa, Idaho 83687
Bill Wey mouth
Phone 208-484-4824

Contact : Mr. Dan Williams
Phone :
Date : Monday, March 30, 2015

Project : City of Nampa Well 20 Well House Improvements Project
Quote No. : US-5774-132

Page No : 5

Pump Model: Peerless Vertical - 14HXB 6 Stages

Nom. Speed: 1770 RPM, 60 Hz Electric

Market : Vertical Turbine Pump

Impeller No.: V4399C / LC

Material Spec. Group: A - B: CIE; I: Brz = Standard

Item : 1

Fluid: Water

Your Ref. :

Temperature: 68 °F

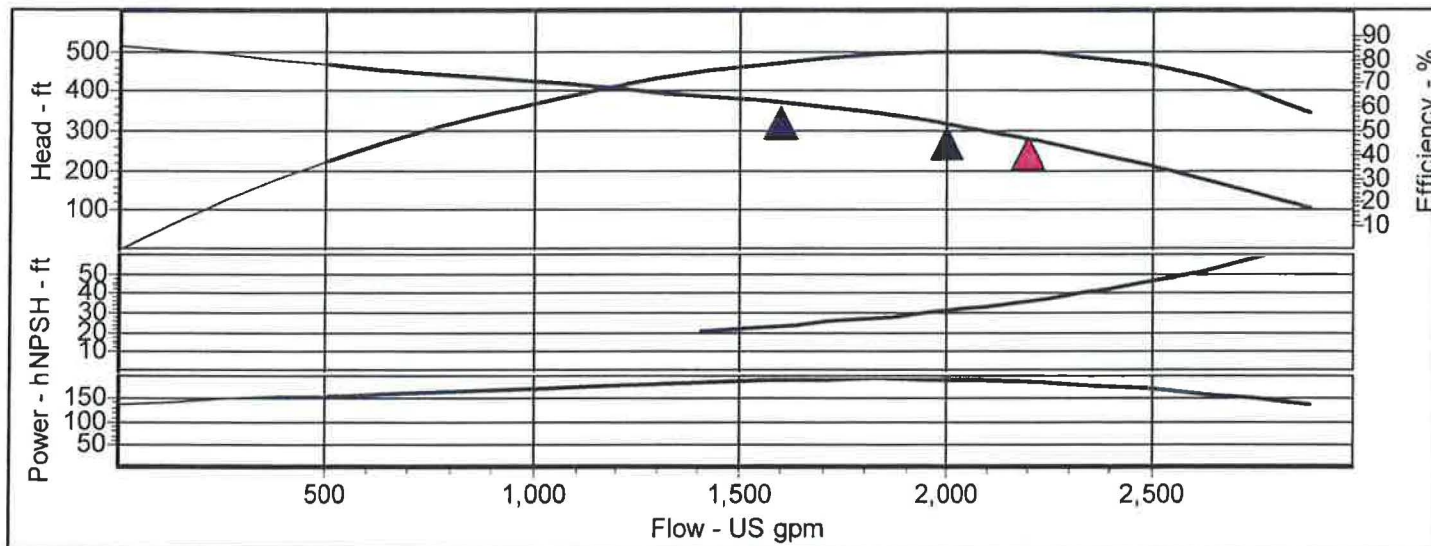
Viscosity: 1.007 cSt

Sp. Gravity: 1.000 (base temp. 68 °F)

Stage No.	Trim Status	Imp. Dia. (inch) D2-in x D2-out
----	Full	----
----	Full	9.16 x 10.44
1 - 6	Trimmed P	9.09 x 10.37

Flow rate Q: 2000 US gpm
Bowl Total Head: 310 ft
Bowl Efficiency: 83.3 %
Bowl Power Required: 192.7 hp
NPSH Required: 31 ft

Performance curve according to Hyd Inst-Peerless Std



Comments

Refer to factory for all single point bowl performance guarantees. Pumps must be selected with Hydraulic Institute-Peerless Std. See Std Hydraulic Performance document in RAPID for testing tolerances & contractual guarantees.

Flow (US gpm)	Head (ft)	Efficiency (%)	Power Required (hp)	NPSH Required (ft)	Thrust (lb)
0.0	512.7	0.0	136.4		9155
361.4	481.2	28.6	153.4		8430
722.8	445.6	49.7	163.8		7458
1084.2	415.7	64.9	175.3		6694
1445.6	386.7	75.4	187.1	20.8	5862
1807.0	347.1	81.8	193.7	27.2	4712
2168.3	286.4	83.1	188.6	35.4	3334
2529.7	202.2	76.6	168.7	47.6	2046
2891.1	108.4	57.4	138.0	66.3	1029

EXAM ATTACHMENT D

PHOTOS OF THE DIVERSION WORKS



Figure 1. Housing for Well No. 20 with Transformer and Backup Generator, looking Northeast

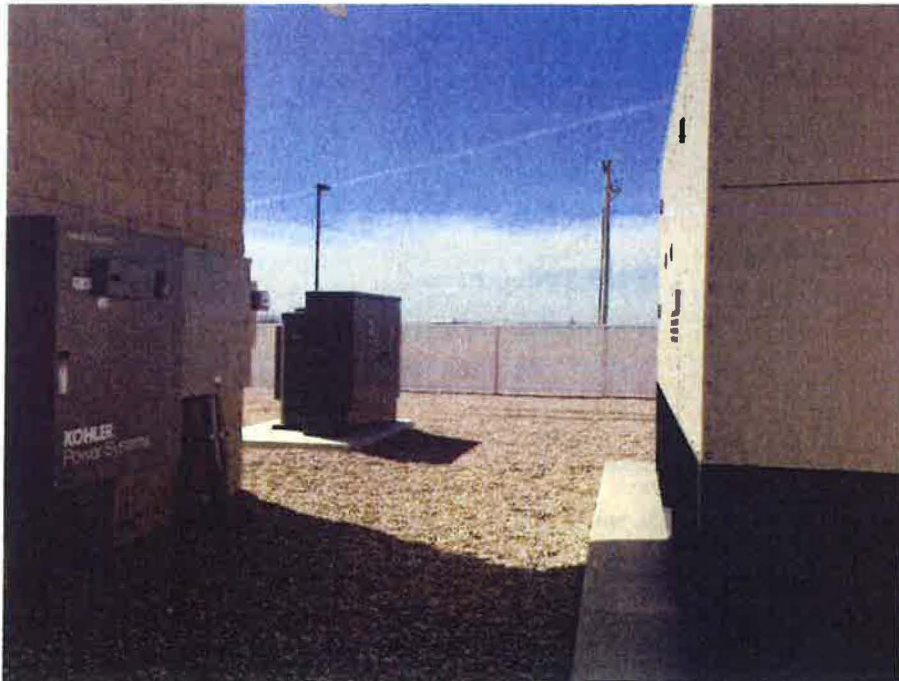


Figure 2: North Side of Well House with Transformer, Backup Generator, & ATS, Looking West



Figure 3. Test Well, Looking North



Figure 4. Well No. 20 Vertical Turbine Pump and Motor

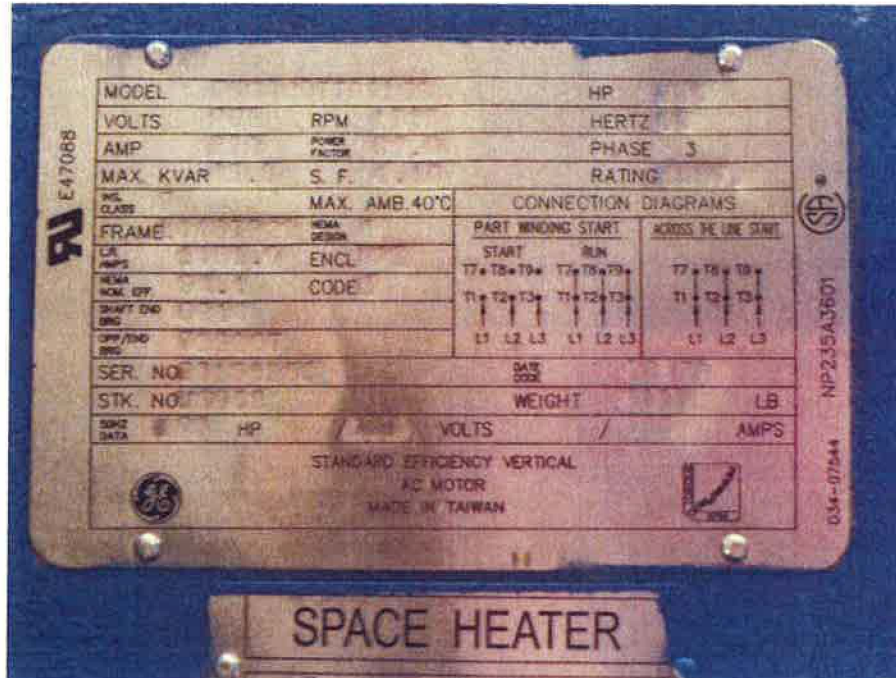


Figure 5. Pump Plate



Figure 6. Diversion Works, Looking Northwest



Figure 7. Diversion Works, Looking Northeast



Figure 8. Flow Meter Reading #1, Approaching Peak Flow

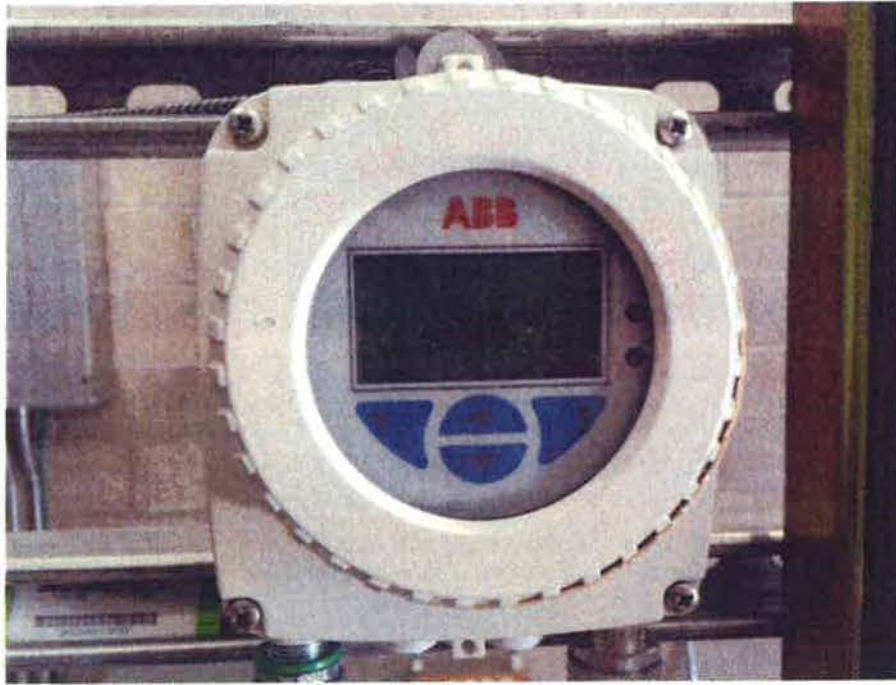


Figure 9. Flow Meter Reading #2, Approaching Peak Flow



Figure 10. Flow Meter Reading #3, Approaching Peak Flow

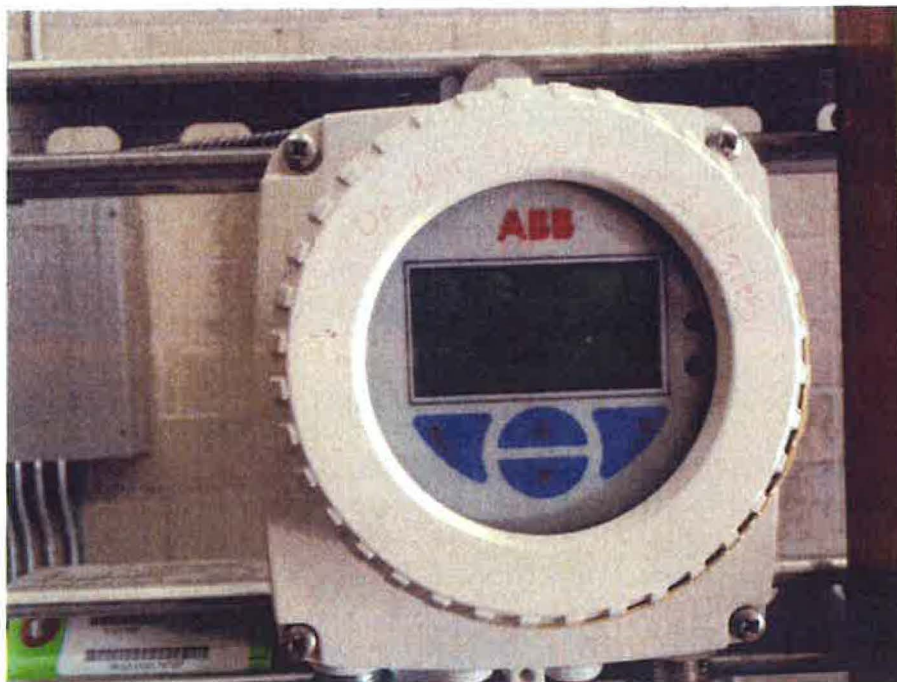


Figure 11. Flow Meter Reading #4, Approaching Peak Flow

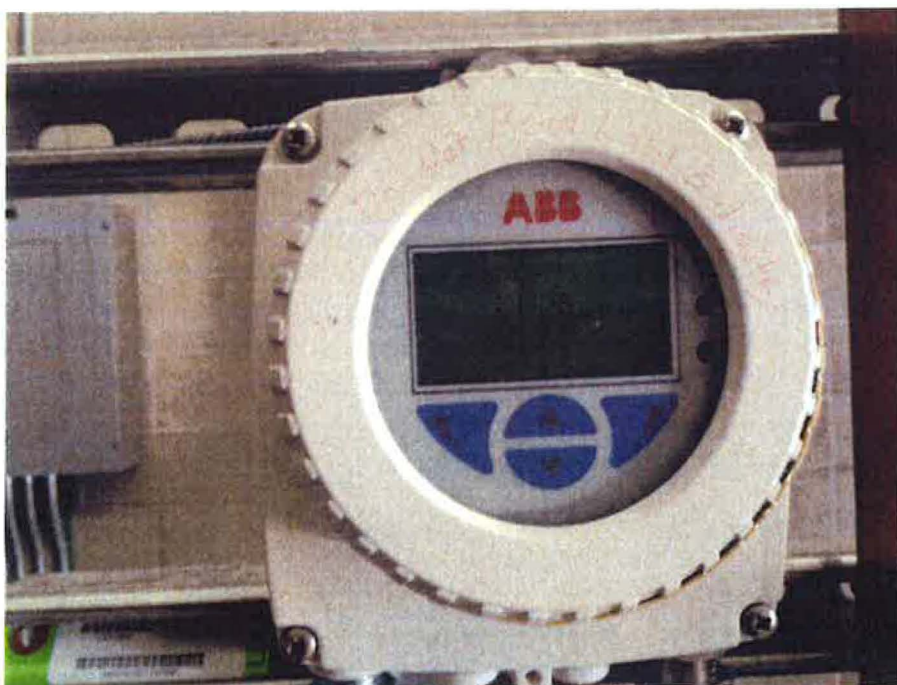


Figure 12. Flow Meter Reading #5, Approaching Peak Flow

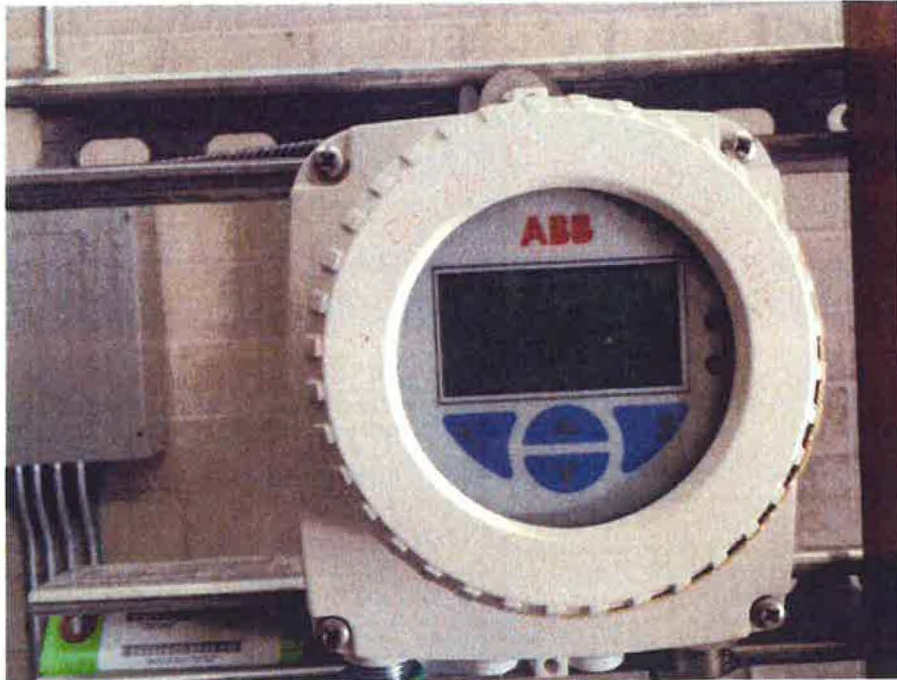


Figure 13. Flow Meter Reading #6, Approaching Peak Flow

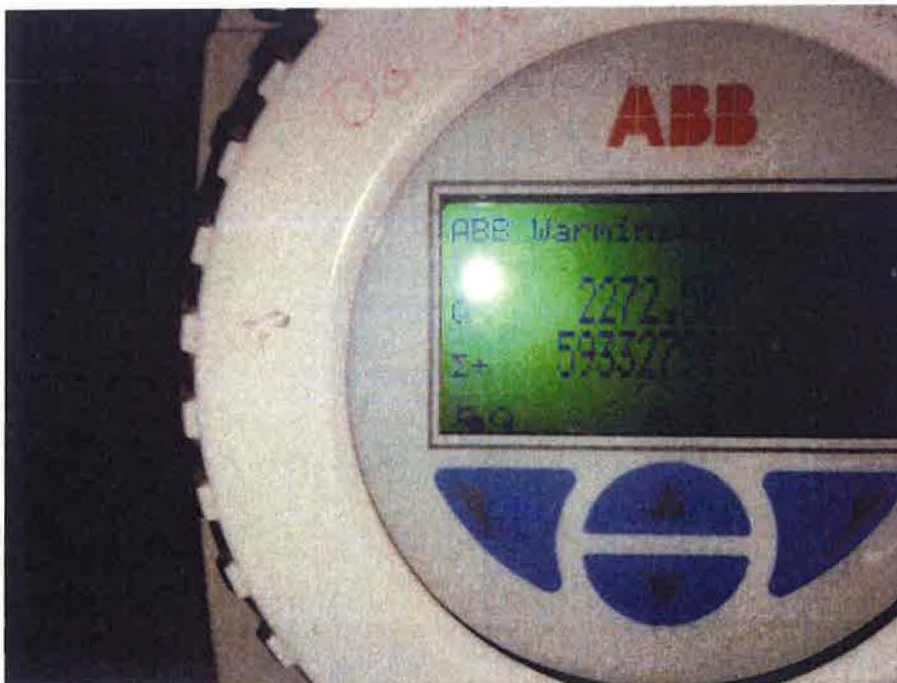


Figure 14. Flow Meter Reading #7, Approaching Peak Flow

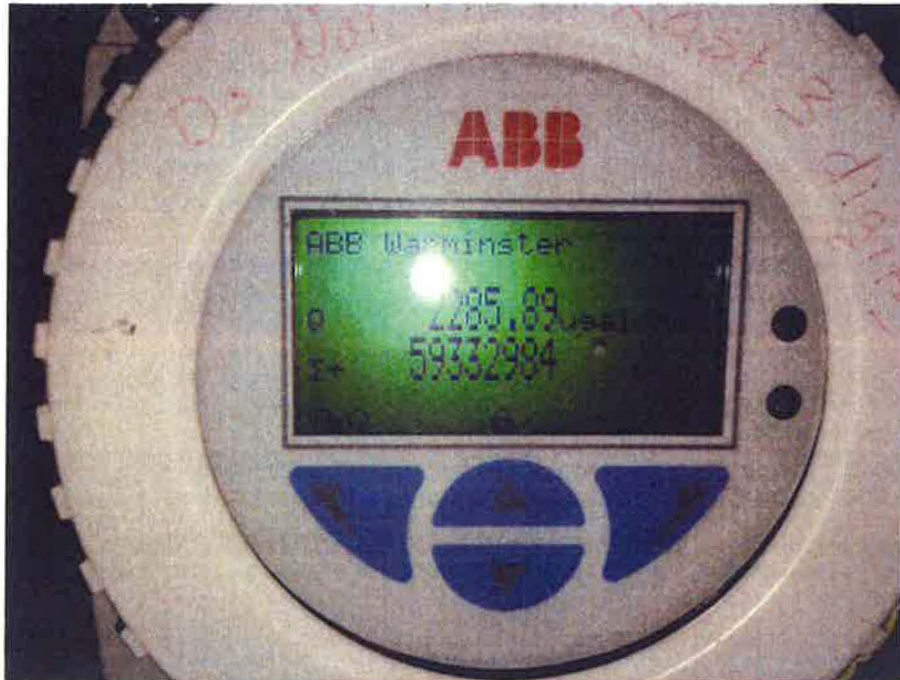


Figure 15. Flow Meter Reading at Observed Peak Flow Rate



Figure 16. Flowmeter and Chlorine Analyzer, Looking North



Figure 17. Tablet Chlorination System, Looking South



Figure 18. Controls, Looking Northwest



Figure 19. Controls, Looking North

EXAM ATTACHMENT E

FLOW MEASUREMENT RECORDS

Permit: 63-32835
Owner: City of Nampa
Site Name: Well #20 - High School Well
POD Location: 04N 02W S34 SWSWNE
Tag No: D0067289
Meter: ABB Warminster
Type: Magnetic Flowmeter
Serial Number: 3K620000179753
Field Exam Date: 4/5/2016
Examiner: Marci Pape

Date/Time	Q (gpm)	Σ + (gal)
4/5/2016 14:31	2236.96	59330765
4/5/2016 14:31	2155.22	59330875
4/5/2016 14:31	2120.55	59321635
4/5/2016 14:32	2186.29	59331886
4/5/2016 14:32	2217.55	59332070
4/5/2016 14:32	2257.92	59332182
4/5/2016 14:32	2272.50	59332794
4/5/2016 14:32	2285.89	59332984

Average Q: 2217 gpm
or 4.94 cfs

Groundwater Quality Monitoring Program for the Elmore County Recharge Site at the Ireland Pit

Prepared for

**Elmore County Commissioners
150 S 4th E Street #3
Mountain Home, ID 83647**

Prepared by

**SPF Water Engineering, LLC
300 East Mallard, Suite 350
Boise, Idaho 83706
(208) 383-4140**

**February 28, 2018
Revised June 15, 2018**



Shelley W. Keen
February 13, 2019
Page 4 of 4

ENCLOSURE #2 –

COPY OF GIVENS PURSLEY LETTER (9/19/2018)