

AUG 30 2010

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
AMENDED BENEFICIAL USE FIELD REPORT

DEPARTMENT OF
WATER RESOURCES

A. GENERAL INFORMATION

Permit No. 63-31949

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

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

2. Accompanied by: Marcos Hernandez EXAM DATE: 6/24/2009

Address: Nampa City Water Works, 24 1st St. S., Nampa, ID 83651 Phone No. 208-941-0056

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: See Attachment B

2. Other water rights with the same 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
			NW	SW	3	2N	2W	Canyon	Exam, 2006 Aerial Photo

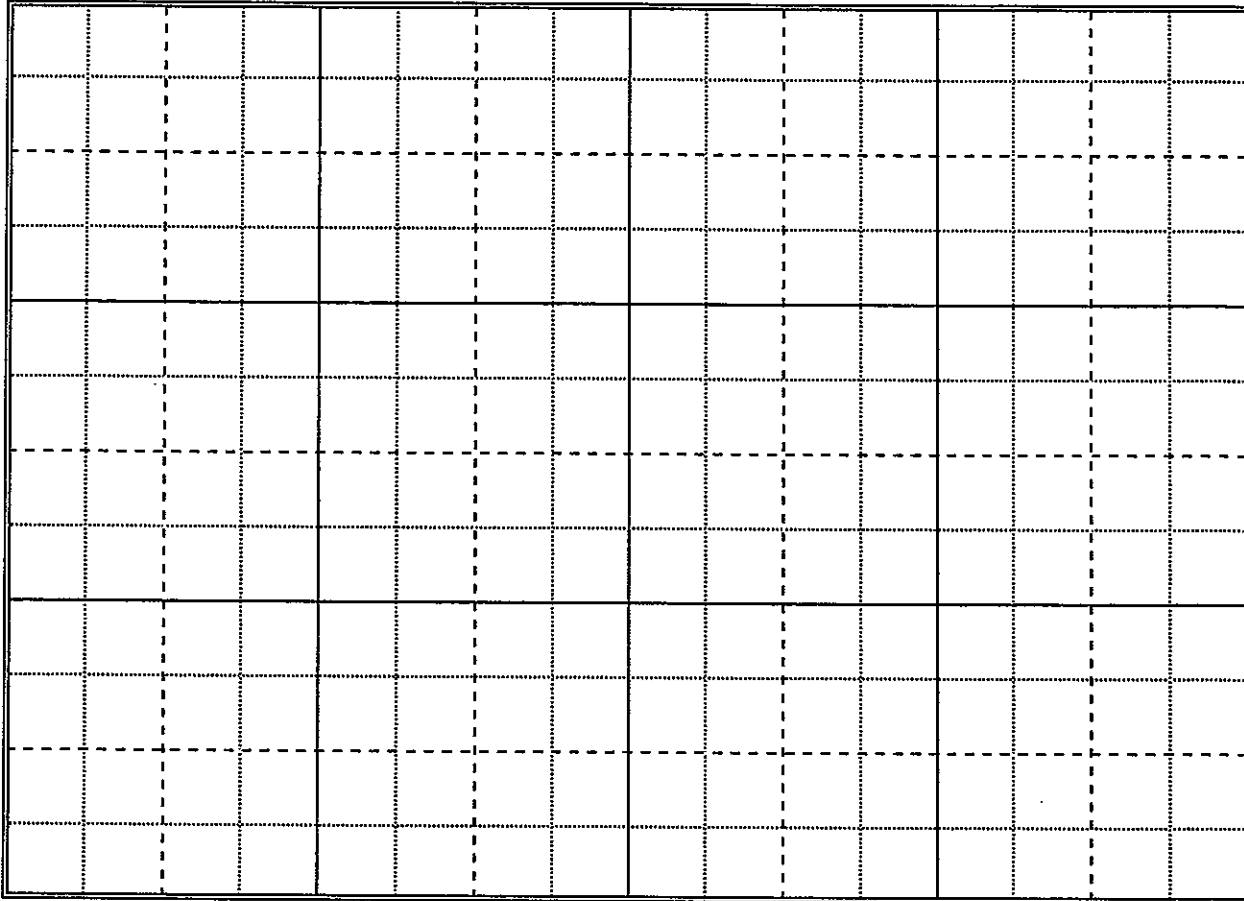
2. Place(s) of Use

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 service area
for the City of Nampa currently on
record with IDWR

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



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

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Vista Ridge	US	200	J01-BF82A-1T	Simflo SV12C 6-stage	10-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	Propeller	McCrometer		05-09492-10	10-inch	

2. **Measurements:** 1000 gpm @ 155 psi

E. NARRATIVE/REMARKS/COMMENTS

A 200-hp variable-speed turbine well pump is installed in a 16-inch diameter well. The pump supplies water for use within the City of Nampa's municipal irrigation system. The well is completed to a depth of 520 feet, with 16-inch casing to 370 feet and 10-inch casing and well screen to 483. The 200-hp pump is set at a depth of 240 feet on 10-inch pipe. Static system pressure at well head is 50 psi.
The well and pump have a functioning flow meter. However, there is no mechanism for flushing the well to waste through the flow meter. During the field exam, irrigation demands were not high enough to allow running the well pump at full capacity. Maximum measured flow was 1000 gpm at 155 psi discharge pressure.

Included as Attachment F is a memo that describes the City of Nampa's municipal water needs and indicates how water diverted under this permit provides an additional increment of water beneficially used by the City to meet their ever-increasing municipal needs. This memo is submitted in compliance with permit condition No. 7.

Water bearing zone listed on the permit is 250 to 440 feet. Water-bearing zone actually developed was 385 to 483 feet (based on well driller's information). Recommend changing the water-bearing zone to 350 to 500 feet.

Have conditions of permit approval been met? ____ yes X no (water-bearing zone exceeded)

F. FLOW CALCULATIONS

Yes Additional Computation Sheets Attached

Measured Method: (Pump Curve and Well log, Attachment B)

Static Water Level = 34.5'

Drawdown at 1500 gpm = 76.5' (±)

Pumping water level at 1500 gpm = 111 feet

Pump Curve: 3.34 cfs (1500 gpm) @ 336 feet TDH

Specific capacity = $1500 / (76.5) = 19.6$ gpm/ft

Assumed friction loss = 15 feet (250' 10"x 1.69" column @ 2'/100 + 10' misc loss)

Discharge pressure at 1500 gpm = 336 feet – 111 feet – 15 feet = 210 feet = 91 psi

Pump Curve: 3.90 cfs (1750 gpm) @ 276 feet TDH

Pumping water level = $34.5 + (1875/19.6) = 124$ feet

Assumed friction loss = 18 feet (250' 10"x 1.69" column @ 2.5'/100 + 12' misc loss)

Discharge pressure at 1500 1750 gpm = 276 feet – 124 feet – 18 feet = 134 = 58 psi

Limit flow rate to permit maximum of ~~3.34~~ 3.40 cfs (1525 gpm)

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

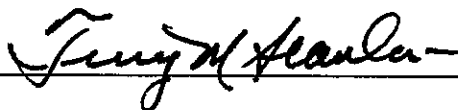
Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Municipal	1/1	12/31	3.34 3.40	
Total			3.34 3.40 cfs	

☐ 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

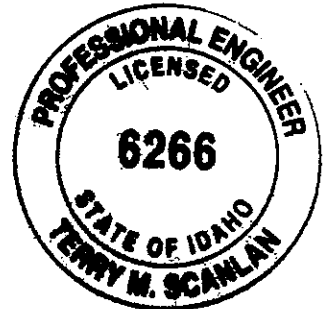
I. AUTHENTICATION

Field Examiner's Name Terry M. Scanlan, P.E., Certified Water Right Examiner 10-129 Date 8/26/10

Field Examiner's Signature 

Reviewer _____ Date _____

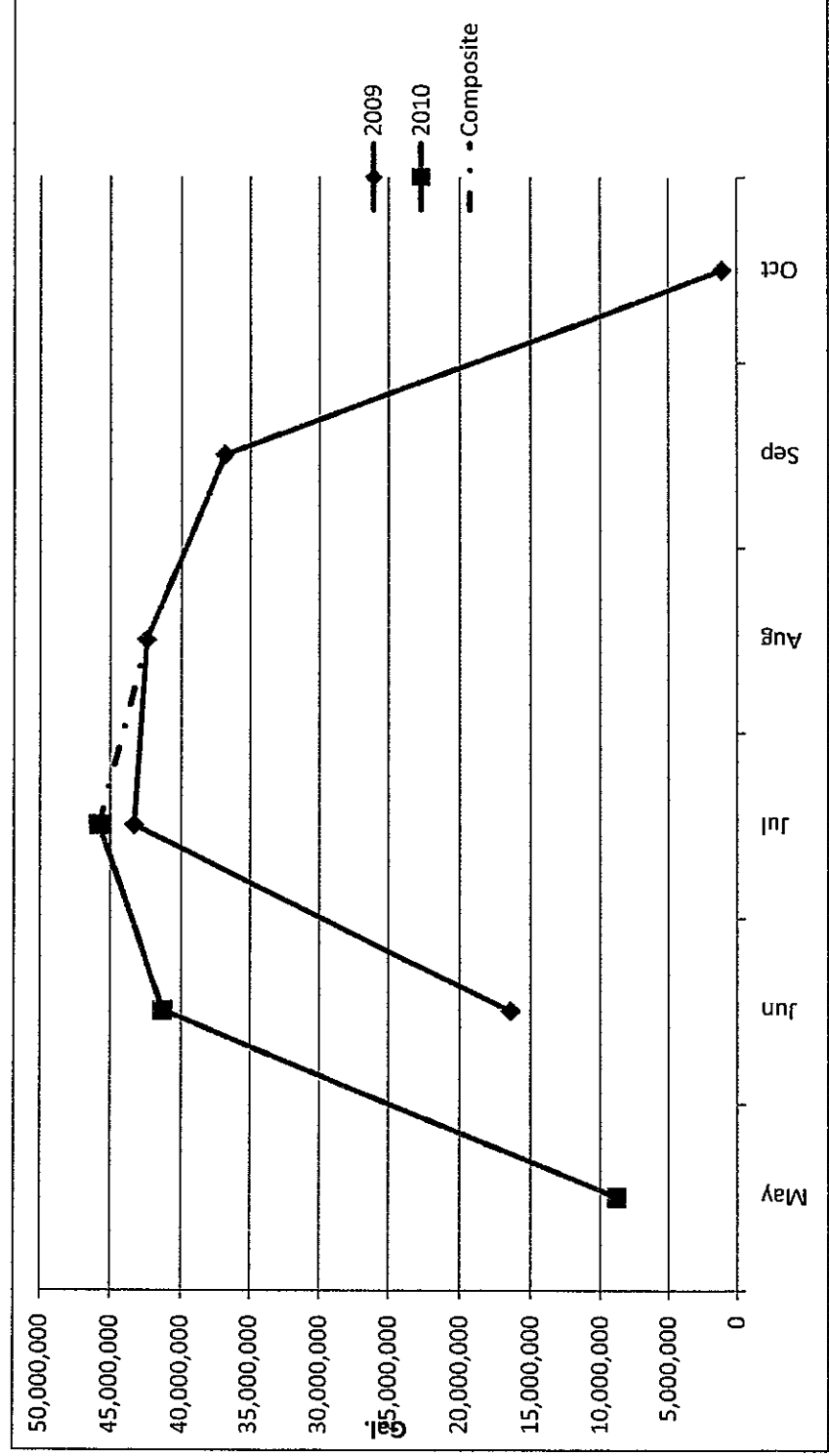
SEAL



2009-2010 Composite Total (gal)

	May	June	Jul	Aug	Sep	Oct
2009						
		16,416,000	43,396,000	42,503,000	36,859,000	1,099,000
2010						
	8,830,000	41,328,000	45,811,000			
Composite						
	8,830,000	41,328,000	45,811,000	42,503,000	36,859,000	1,099,000

Total = 176,430,000



NORTH IRRIGATION PUMP TOTALS / SEASON TOTAL 2009									
PUMP STATION	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	TOTAL	
HAPPY VALLEY	0	0	16,416,000	43,396,000	42,503,000	36,859,000	1,099,000	140,273,000	

Production Data

Happy Valley Well

2010

NORTH IRRIGATION PUMP TOTALS		2010									
PUMP STATION	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	TOTAL			
HAPPY VALLEY	0	8,830,000	41,328,000	45,811,000				95,969,000			

Pump : Happy Valley**Month/Year:****May 2010****Begin Read:****140257000****149,087,000**

Day	GPM	PSI	Total Gallons	Comment
1			-000	
2			-000	
3			-000	
4			-000	
5			-000	
6			-000	
7			-000	
8			-000	
9			-000	
10			-000	
11			-000	
12			-000	
13	364	82	140345000	
14			-000	
15			-000	
16			-000	
17	359	87	143106000	
18			-000	
19			-000	
20	386	86	145071000	
21			-000	
22			-000	
23			-000	
24	315	87	147773000	
25			-000	
26	339	87	149087000	
27			-000	
28			-000	
29			-000	
30			-000	
31			-000	

Month Totals: 8,830,000

Pump : Happy Valley**Month/Year:****June 2010****Begin Read:****149087000 End Read:190415,000**

Day	GPM	PSI	Total Gallons	Comment
1	294	87	152712000	
2	281	87	153274000	
3	349	87	154245000	
4			-000	
5			-000	
6			-000	
7	473	87	158264000	
8			-000	drive fault, restarted
9	606	87	160695000	
10	491	87	161877000	
11			-000	
12			-000	
13			-000	
14	1194	87	167869000	
15	637	87	169191000	
16	963	86	171482000	
17			-000	
18			-000	
19			-000	
20			-000	
21	898	87	177772000	
22	723	87	179441000	
23	845	87	180869000	
24	795	87	182506000	
25			-000	
26			-000	
27			-000	
28	849	87	188962000	
29	726	87	190415000	
30			-000	
31			-000	

Month Totals: 41,328,000

Pump : Happy Valley**Month/Year:****July 2010****Begin Read:****190415000 End Read:236226,000**

Day	GPM	PSI	Total Gallons	Comment
1	700	87	193760000	
2			-000	
3			-000	
4			-000	
5			-000	
6	657	87	200898000	
7			-000	
8	831	87	204096000	
9			-000	
10			-000	
11			-000	
12	1016	87	208149000	
13	979	87	209005000	reset fault
14	1325	87	210124000	reset fault
15	964	87	212163000	
16			-000	
17			-000	
18			-000	
19	1557	87	219724000	
20			-000	
21	991	87	223589000	
22			-000	
23			-000	
24			-000	
25			-000	
26	1255	85	231969000	reset fault
27			-000	
28			-000	
29	965	87	236226000	
30			-000	
31			-000	

Month Totals: 45,811,000

Pump : Happy Valley**Month/Year:****August 2010****Begin Read:****236226000 End Read:**

Day	GPM	PSI	Total Gallons	Comment
1			-000	
2	960	87	243637000	
3	1260	87	245829000	
4	949	87	247270000	
5			-000	
6			-000	
7			-000	
8			-000	
9			-000	
10			-000	
11			-000	
12			-000	
13			-000	
14			-000	
15			-000	
16			-000	
17			-000	
18			-000	
19			-000	
20			-000	
21			-000	
22			-000	
23			-000	
24			-000	
25			-000	
26			-000	
27			-000	
28			-000	
29			-000	
30			-000	
31			-000	

Month Totals: 45053180 Estimated