

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED

MAY 27 2015

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. 63-333201. Owner City of MeridianPhone No. 208-898-5500Current address 33 E. Broadway Ave., Meridian, ID 83642-26192. Examiner's name Peter Cooper, P.E. (Examiner 15-155)EXAM DATE 4/17/15 & 5/18/153. Accompanied by Mike BartonEmail mbarton@meridiacity.orgAddress same as aboveRelationship to permit holder SuperintendentPhone No. 208-888-35794. Source Ground Water

tributary to _____

B. OVERLAP REVIEW1. Other water rights with the same place of use 63-33318, New York Irrigation District surface water2. Other water rights with the same source and point of diversion 63-33318**C. DIVERSION AND DELIVERY SYSTEM**

1. Point(s) of Diversion:

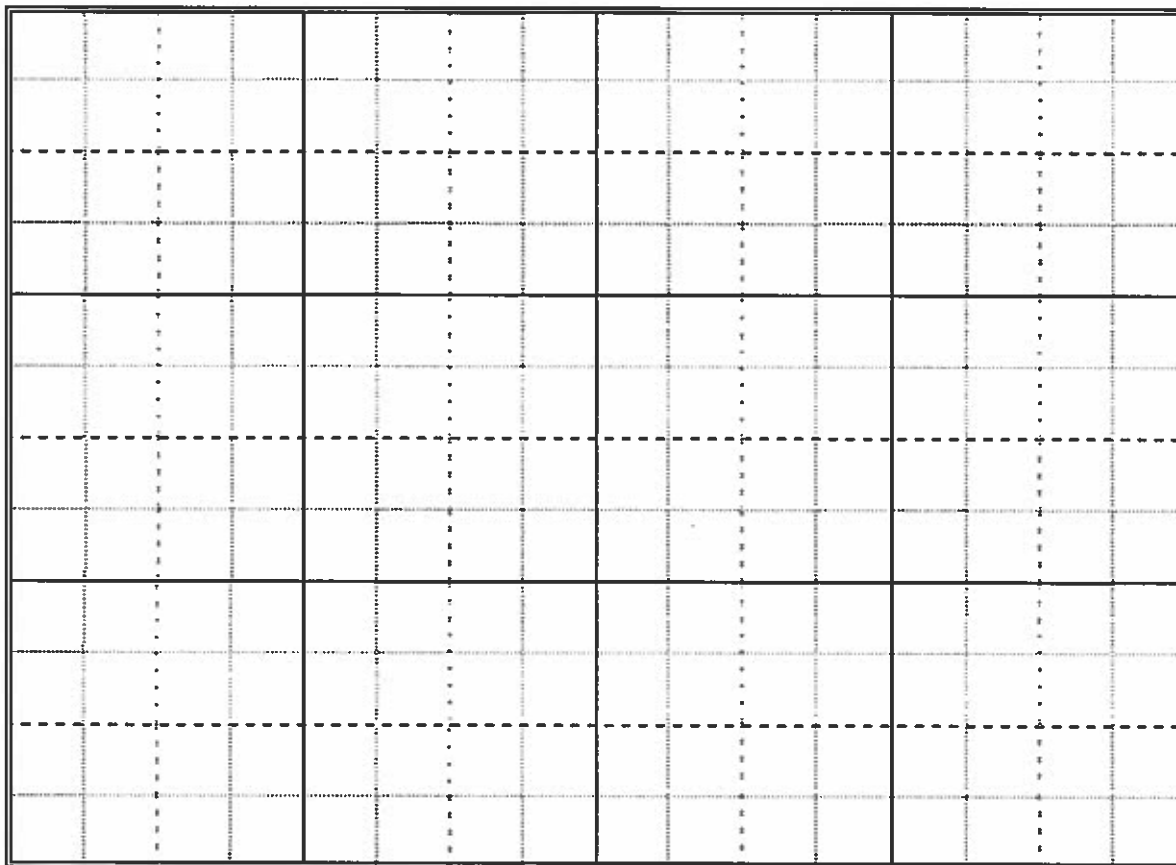
Ident. No.	Gov't Lot	¼	¼	¼	Sec	Twp	Rge	County	Method of Determination/Remarks
Well	3		NE	NW	5	2N	1E	Ada	Exam, GIS Aerial photo

2. Place(s) of Use:

Method of determination Exam, GIS Aerial photo

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
2N	1E	5					34			39									73
							L3												

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
D0067274	unknown	60	submersible turbine	Goulds 8FDLC	3 stage, 8-inch

*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
Portable Flowmeter	Ultrasonic	GE	PT878	7140	various	March 30, 2015

2. **Measurements:** _____

Examiner measured 1.79 cfs from the NENW well.

The NWNE well listed on the permit will no longer be used for irrigation of the recommended POU.

E. NARRATIVE/REMARKS/COMMENTS

The well listed on the permit in the NWNE, Gov. lot 2 is a shared well located on property not owned by the City. This well was originally drilled in 1992 and replaced in 2007. The original NWNE well was licensed in 1999 under right 63-11703 for irrigation of 103 acres with a system capacity of 1.07 cfs and full volume of 463.5 ac-ft. Right 63-11703 is now the parent right for 63-33318 (75 acres and 0.78 cfs). The 73-ac place of use recommended for licensing under permit 63-33320 are irrigated under overlapping right 63-33318. The well listed on the permit in the NENW, gov. lot 3, was drilled in 2014 and added to right 63-33318 as a 2nd point of diversion per approved transfer No. 79168.

The examiner found the NENW well equipped with a 60 hp submersible pump with a measured system capacity of 1.79 cfs. Because this well is located on City property and has sufficient capacity for irrigation of all 75 acres, the City will no longer use the NWNE shared well.

Ground water from the NENW well is discharged into gravity ditches at the north end of the property and in the southern half of the property for gravity irrigation of the 73 acres under permit 63-33320. These same ditches/gravity irrigation systems are used for surface water delivered from New York Irrigation District. Ground water will be used for irrigation when surface water is not available or insufficient.

Based on the exam findings, permit 63-33320 is recommended to be licensed for one well at 0.72 cfs and 73 acres, allowing full appropriation of ground water on 75 acres currently authorized under right 63-33318. Recommended licensing conditions include:

1. Water rights 63-33318 and 63-33320, when combined, are limited to 1.50 cfs, 337.5 ac-ft on 75 acres
2. Standard supplemental ground water conditions

Attachment A: permit and proof of beneficial use

Attachment B: well driller's report and pump curve

Attachment C: system capacity flow calculation

Attachment D: topographical map and aerial photo

Attachment E: photos of place of use and wells

Has the permit holder met all conditions of permit approval, including any mitigation requirements and/or measuring device installation requirements? ☒ Yes ☐ No If no, what must be done to meet the permit requirements?

4

ATTACHMENT A
PERMIT RECORD AND PROOF OF BENEFICIAL USE

State of Idaho
Department of Water Resources
Permit to Appropriate Water

NO. 63-33320

Priority: December 30, 2009

Maximum Diversion Rate: 0.76 CFS

This is to certify, that CITY OF MERIDIAN
33 E IDAHO ST
MERIDIAN ID 83842

has applied for a permit to appropriate water from:

Source: GROUND WATER

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

BENEFICIAL USE
IRRIGATION

PERIOD OF USE
03/01 to 11/15

RATE OF DIVERSION
0.76 CFS

LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER L3 (NE 1/4 NW 1/4)

Sec. 5, Twp 02N, Rge 01E, B.M., ADA County

GROUND WATER L2 (NW 1/4 NE 1/4)

Sec. 5, Twp 02N, Rge 01E, B.M., ADA County

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Totals
02N	01E	5													77.0

Total Acres: 77

CONDITIONS OF APPROVAL

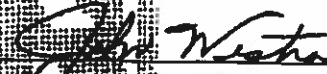
1. Proof of application of water to beneficial use shall be submitted on or before June 01, 2015.
2. Subject to all prior water rights.
3. This right does not grant any right-of-way or easement across the land of another.
4. After specific notification by the Department, the right holder shall install 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.
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.

State of Idaho
Department of Water Resources
Permit to Appropriate Water

NO. 63-33320

6. The right holder shall make full beneficial use of all surface water rights available to the right holder for irrigation of the lands authorized to be irrigated under this right. The right holder shall limit the diversion of ground water under this right to those times when the surface water supply is not available or the surface water supply is not reasonably sufficient to irrigate the place of use authorized under this right.
7. If the surface water right(s) appurtenant to the place of use is abandoned, forfeited, sold, transferred, leased or used on any other place of use, this right to divert ground water shall not be used without an approved transfer pursuant to Section 42-222, Idaho Code, or approval of the Department if a transfer is not required.
8. This right when combined with all other rights shall provide no more than 4.5 afa per acre at the field head gate for irrigation of the lands above.
9. This right when combined with all other rights shall provide no more than 0.02 cfs per acre nor exceed a combined annual maximum diversion volume of 346.5 af at the field head gate for the lands above.
10. Right Nos. 63-33320 and 63-33318 are limited to the irrigation of a combined total of 75 acres in a single irrigation season.
11. Right 63-33318 is also diverted through the point(s) of diversion, Lot 2 (NWNE), described above.
12. 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 23rd day of June, 2010.


JOHN WESTRA, Western Regional Manager

RECEIVED

MAY 27 2015

DEPARTMENT OF
WATER RESOURCES

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

FOR OFFICE USE ONLY

Amt. of Fee \$: _____
Receipt No. _____
Receipt By: _____
Date Received: _____

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.: 63-33320 Telephone No.: 208-898-5500

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

3. Mailing Address: 33 E. Broadway Ave. City: Meridian

State: ID Zip: 83642-2619 Email: mbarton@meridiancity.org

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

Well Driller: Stevens & Sons Drilling Permit Number: 966314-872373

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): 77 Other: _____

6. Total rate of diversion or storage volume for which proof is submitted: 0.76 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 ☒
If yes, has the measuring device been installed? Yes ☐ No ☐

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

Yes ☐ No ☒
If yes, has the lockable device been installed? Yes ☐ No ☐

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.

Completed? Yes ☐ No ☐

8. Fee Enclosed: \$ n/a 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: n/a Telephone Number: _____

Mailing Address: _____ City: _____

State: _____ Zip: _____ 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] PARKS SUPERINTENDENT
(Include your title, if on behalf of company or organization)

Date: 5-21-2015

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

ATTACHMENT B

WELL DRILLER'S REPORT AND PUMP CURVE

Model: VIS-T**Size: 8FDLC****60Hz****RPM: 3450****Stages: 3**

Job/Inq.No. :

End User :

Item/Equip.No. : ITEM 001

Order No. :

Purchaser :

Issued by : Jason Thompson

Service :

Quotation No. : JT14-08-05 01

Date : 08/05/2014

Certified By :

Rev. : 0

Operating Conditions

Temp.: 70.0 deg F
Design Flow: 700.0 gpm
Design TDH: 220.0 ft
Actual Flow: 700.0 gpm
Actual Bowl Head: 222.5 ft
NPSHa:
Solid size:
Bowl Size: 7.5000 in
Liquid:
S.G./Visc.: 1.000/1.000 cp

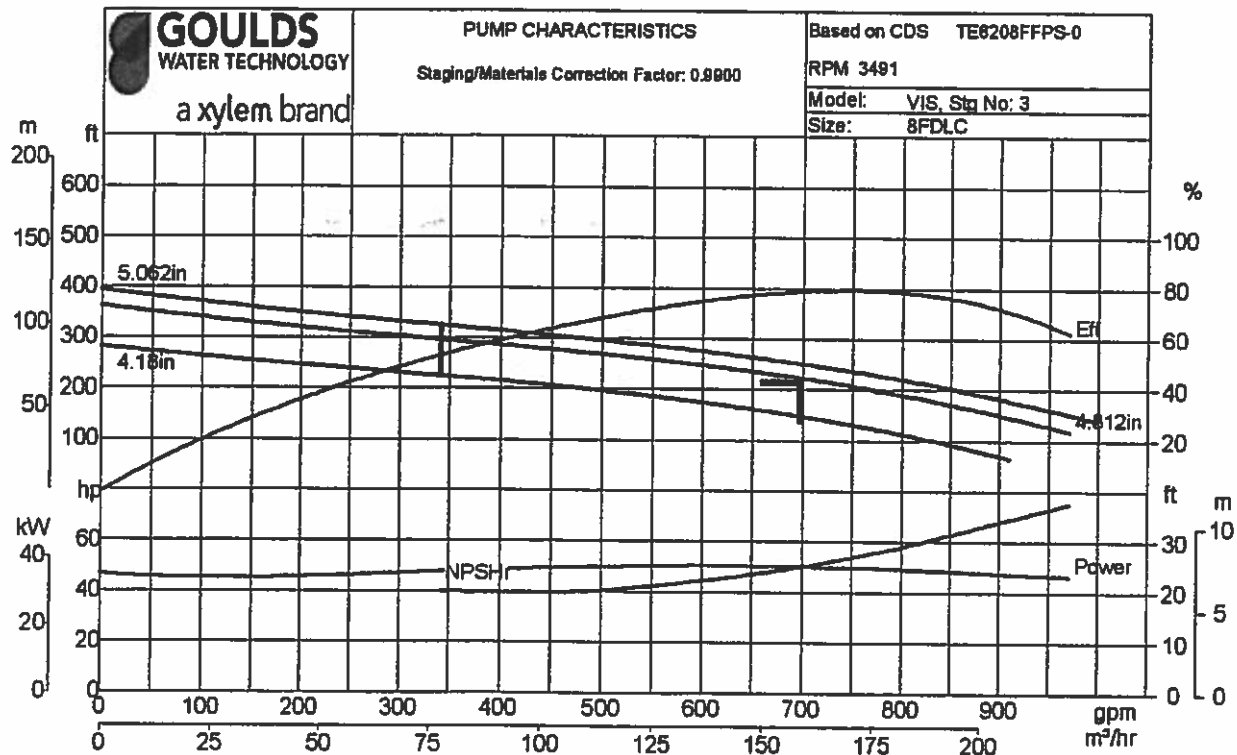
Bowl Efficiency:
Rated Pump Efficiency: 78.4 %
Rated Total Power: 50.18 hp
Non-Overloading Power: 50.4 hp
Imp. Dia. First 1 Stg(s): 4.8125 in
NPSHr: 25.1 ft
Shut off Head: 362.9 ft
Max. Lateral: 0.5600 in
Bowl Material: Cast iron with glass enamel
Impeller Material: Bronze

Pump Performance

Suction Specific Speed: 8,010 gpm(US) ft
Min. Hydraulic Flow: 340.3 gpm
Min. Thermal Flow: N/A
Imp. Dia. Add'l Stg(s): 4.8125 in
Vapor Press:
Max. Solids Size: 0.5000 in
Thrust K factor: 7.90

Notes: 1. Bowl Performance Curve based on Pumping Clear, non-Aerated Water. Rated Point only is guaranteed.

2. For units requiring performance test, all performance tests will be conducted per ANSI/HI 14.6 standards unless otherwise noted in the selection software submittal documents. Test results meeting with grade 2B tolerances for pumps with a rated shaft power of 134HP or less and grade 1B for greater than 134HP will be considered passing.



ATTACHMENT C

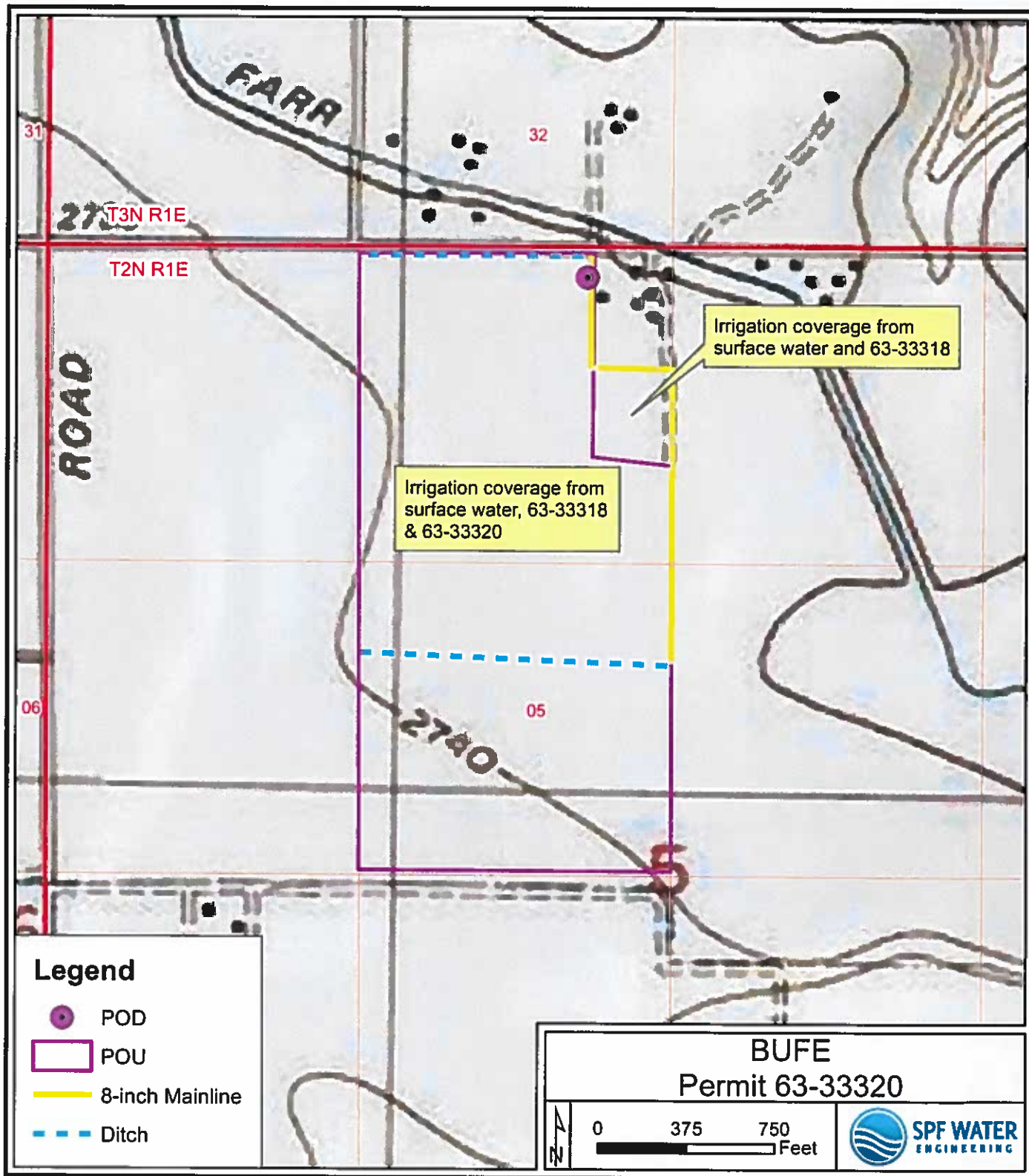
SYSTEM CAPACITY FLOW CALCULATION

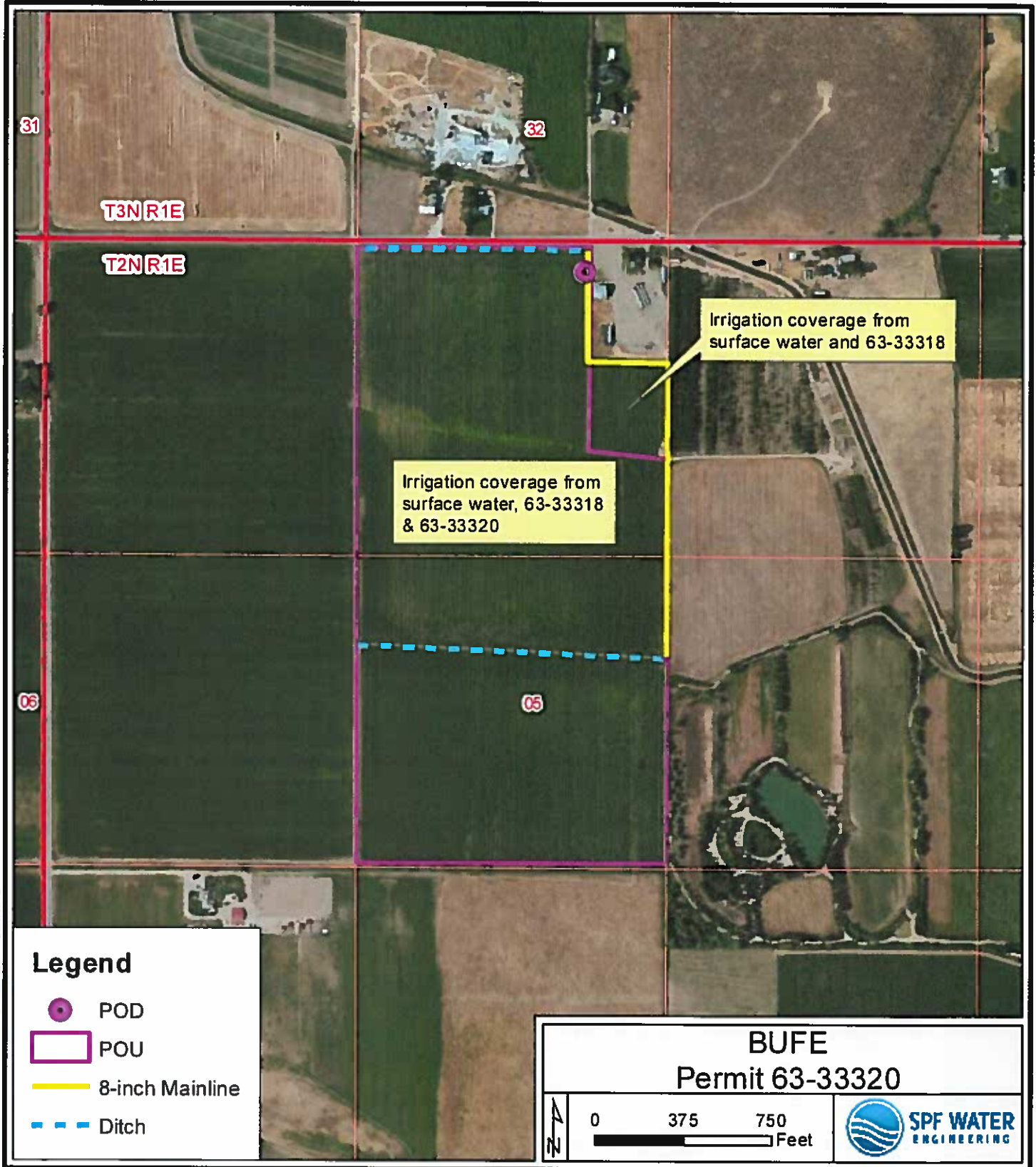
Permit: 63-33320
Owner: City of Meridian
Site Name: NENW Well
POD Location: T2N R1E Section 5 NENW
Tag No:
Meter: GE TransPort PT878
Type: Portable Ultrasonic Time Flight Liquid Flow Meter
Serial Number: 7140
Calibration Date: 3/30/2015
Operator: Peter Cooper, P.E.

Date/Time	Velocity (ft/s)	(+)Total (gal)	Error #
4/17/2015 10:18	5.05	133789.1	0
4/17/2015 10:19	5.06	134605.1	0
4/17/2015 10:20	4.8	135392.3	0
4/17/2015 10:21	4.86	136136.4	0
4/17/2015 10:22	4.87	136942.5	0
4/17/2015 10:23	4.98	137747.6	0
4/17/2015 10:24	5.01	138558	0
4/17/2015 10:25	5.04	139336.5	0
4/17/2015 10:26	5.03	140164.4	0
4/17/2015 10:27	5.03	140985.7	0
4/17/2015 10:28	4.98	141804.2	0

Time: 10 minutes
Total Volume 8015.1 gallons
Average Flow Rate 801.5 gpm
Average Flow Rate 1.79 cfs

ATTACHMENT D
TOPO MAP & AERIAL PHOTO





T3N R1E

T2N R1E

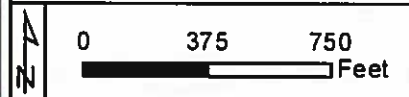
Irrigation coverage from surface water and 63-33318

Irrigation coverage from surface water, 63-33318 & 63-33320

Legend

- POD
- POU
- 8-inch Mainline
- - - Ditch

BUFE
Permit 63-33320



ATTACHMENT E
PHOTOS



Figure 1: NENW well facing westerly. The NENW well discharges groundwater into a system of 8-inch pipes to deliver water to gravity irrigation ditches at the north end and southern half of the property. The gravity ditches run to the west and water is gravity fed to the fields with siphon tubes.



Figure 2: Looking west at the north gravity ditch. Discharge from the NENW well's 8-inch pipe into a 3 foot width x 1.5 foot deep concrete trapezoidal gravity ditch at the north end of the property running westerly along the south side of Lake Hazel Road.



Figure 3: Looking south at siphon tubes diverting water from the gravity ditch into the northern portion of the property.



Figure 4: Looking south from the north edge of the property at the well (in the background) and the manifold valves that are used to direct water to the north gravity ditch (right branch in photo) and/or the south gravity ditch (left branch in photo).



Figure 5: Looking west at the 8-inch pipe that discharges into the southern gravity ditch. Surface water can also be delivered into the gravity ditches from the New York Irrigation District as is occurring in this photo.