

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-32052

Exam Date: 6/1/2012

1. Current Owner: TUSCANY HOMEOWNERS ASSOCIATION INC
6223 N DISCOVERY WAY STE 120
BOISE ID 83713
(208) 323-4000
2. Accompanied by: Greg Johnson
Phone No: (208) 888-9946
Address: P.O. Box 344, Meridian, ID 83680
Relationship to Permit Holder: Developer

3. **SOURCE**GROUND WATER
GROUND WATER**TRIBUTARY**

BOISE RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None
2. Other water rights with the same point of diversion: None

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER	(Pond No.5)	NE1/4NW1/4	Sec. 29,	Twp 03N,	Rge 01E, B.M.
ADA County					
GROUND WATER	(Pond No.1)	SE1/4NW1/4	Sec. 29,	Twp 03N,	Rge 01E, B.M.
ADA County					
GROUND WATER	(Pond No.2)	SE1/4NW1/4	Sec. 29,	Twp 03N,	Rge 01E, B.M.
ADA County					
GROUND WATER	(Pond No.3)	SE1/4NW1/4	Sec. 29,	Twp 03N,	Rge 01E, B.M.
ADA County					
GROUND WATER	(Pond No.4)	SE1/4NW1/4	Sec. 29,	Twp 03N,	Rge 01E, B.M.
ADA County					
GROUND WATER	(Well)	SE1/4NW1/4	Sec. 29,	Twp 03N,	Rge 01E, B.M.
ADA County					

Method of Determination: Arc Map (Aerial Photo); Well – GPS Garmin III Plus N 2308832, E 1376938; Datum – NAD 83.

2.

PLACE OF USE: AESTHETIC STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
03N	01E	29					X	X	X	X									

Method of Determination: Arc Map (Aerial Photo)

3. ☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
- ☒ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
- ☒ Aerial Photo Attached (required for irrigation of 10+ acres).
- ☒ Photo of Diversion and System Attached

4.

<u>Well or Diversion ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Model No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge Size</u>
__D0041645__	__Franklin__	__7.5	2822019310__	_____	_____ (3") _____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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

D. FLOW MEASUREMENTS

1.

<u>Measurement Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
__N/A__	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

2. Measurements: No field measurements. Well discharge into Pond No.1.

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method (Theoretical HP Equation):

HP = 7.5 (Tag on Junction Box)

Z = 125' (Test Pump Level)

P = 50 psi (Assumed – No pressure gauge)

$$Q = 7.5 \times 8.8 \times 0.7/125 + (2.31 \times 50) = 46.2/240.5 = 0.19 \text{ cfs}$$

Q(Permit) = 0.20 cfs > 0.19 cfs (Appears well is capable of producing the requested permit flow)

F. 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:

Storage Pond No.1: $V = 1.0 \text{ ac} \times 9\text{-feet} = 9 \text{ afa}$ (Average Pond Depth = 9-feet)

Storage Pond No.2: $V = 0.4 \text{ ac} \times 9\text{-feet} = 3.6 \text{ afa}$ (Average Pond Depth = 9-feet)

Storage Pond No.3: $V = 0.25 \text{ ac} \times 7\text{-feet} = 1.8 \text{ afa}$ (Average Pond Depth = 7-feet)

Storage Pond No.4: $V = 0.60 \text{ ac} \times 6\text{-feet} = 3.6 \text{ afa}$ (Average Pond Depth = 6-feet)

Storage Pond No.5: $V = 0.15 \text{ ac} \times 5\text{-feet} = 0.8 \text{ afa}$ (Average Pond Depth = 5-feet)

$$\text{Total} = 18.8 \text{ afa} > 16.8 \text{ afa (permit)}$$

G. NARRATIVE/REMARKS/COMMENTS**AESTHETIC STORAGE POND SYSTEM:**

Five interconnected aesthetic storage ponds were constructed for the Tuscany development. The aesthetic storage ponds are interconnected by culvert pipes. The developer indicated that due to the high ground water table, approximately 18" – 24", the majority of the aesthetic storage ponds are filled with ground water. The well, which is located near Storage Pond No.1, has a 3" discharge line which discharges to Storage Pond No.1. The well runs continuously to maintain adequate water levels in the aesthetic storage ponds due to seepage and evaporation losses, and to provide a continuous active flow through the interconnected aesthetic storage ponds. Two concrete overflow structures, one located at the north end of Storage Pond No.4 and the other at the south end of Storage Pond No.5, discharge to a concrete diversion structure located between the two storage ponds. The diversion structure discharges the storage pond overflow to Ten Mile Creek to the west through approximately 700 lineal feet of 12" PVC pipe.

Based on the pond depths provided by the developer, an assumption was made on the average depths of the five storage ponds. It is assumed that the average depth of the storage ponds decreases from 9-feet in Storage Ponds No.1 and No.2, to an average depth of 5-feet in Storage Pond No.5. The average depth for Storage Pond No.3 is assumed to be 7-feet, while the average depth of Storage Pond No.4 is assumed to be 6-feet. Assuming 1-foot of freeboard, and ground water depths of 2-feet, approximately 1-foot of depth in the storage ponds will need to be filled by the well. Based on the approximate total storage pond surface area of 2.4 acres, approximately 780,000 gallons, excluding seepage and evaporation, would be needed to fill the storage pond system. Since the

appropriated flow of 0.20 cfs (approximately 90 gpm) is inadequate to fill the storage pond system within 24-hours, it is assumed that the well's primary function is to maintain water surface elevations and an active flow through the storage pond system, and to replace the storage pond losses due to seepage and evaporation.

PERMIT ASSIGNMENT:

A water right assignment was executed in March, 2010, with Tuscany Development assigning the water right permit to the Tuscany Homeowners' Association, Inc.

RATE &/OR STORAGE RECOMMENDED FOR LICENSING

Description	Rate of Flow (cfs)		Storage (af)
Permit Amount	0.20	&/or	16.8
Beneficial Use Limit	0.20	&/or	16.8
System Measurement	0.19(Theoretical)	&/or	18.8
Proof Fee Amount	0.20	&/or	16.8
Recommended Amount	0.20	&/or	16.8

Have conditions of permit approval been met? ☒ Yes ☐ No

Condition No.1 (170): Mitigation

Applicant purchased a portion of the Mellin ground water right 63-7194, 0.05 cfs and an annual volume of 12.6 af, to mitigate the 2.8 acres of irrigable land impacted by the construction of the five aesthetic storage ponds. The 'Contract for Sale of a Water Right' was executed in February, 2005. Water right number 63-32397 was issued in 2008 to complete the required mitigation.

Condition No.7: Initial Filling of Ponds

Developer Greg Johnson confirmed that the initial filling of the storage ponds was completed by the rental of 16.8 af of water from the State Water Supply Bank.

Condition No.3: Water Bearing Zone

Based on the well log, the well was constructed to a depth of 201 feet, which complies with the required water bearing zone of 0 to 250 feet.

Condition No.8: Well Construction

According to the well log, the well was cased the entire depth of the well (201 feet), which exceeds the minimum casing depth of 150 feet.

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
DIVERSION TO STORAGE	01/01 to 12/31	0.200 CFS	
AESTHETIC STORAGE	01/01 to 12/31		16.80 AF
<u>Totals:</u>		0.200 CFS	16.80 AF

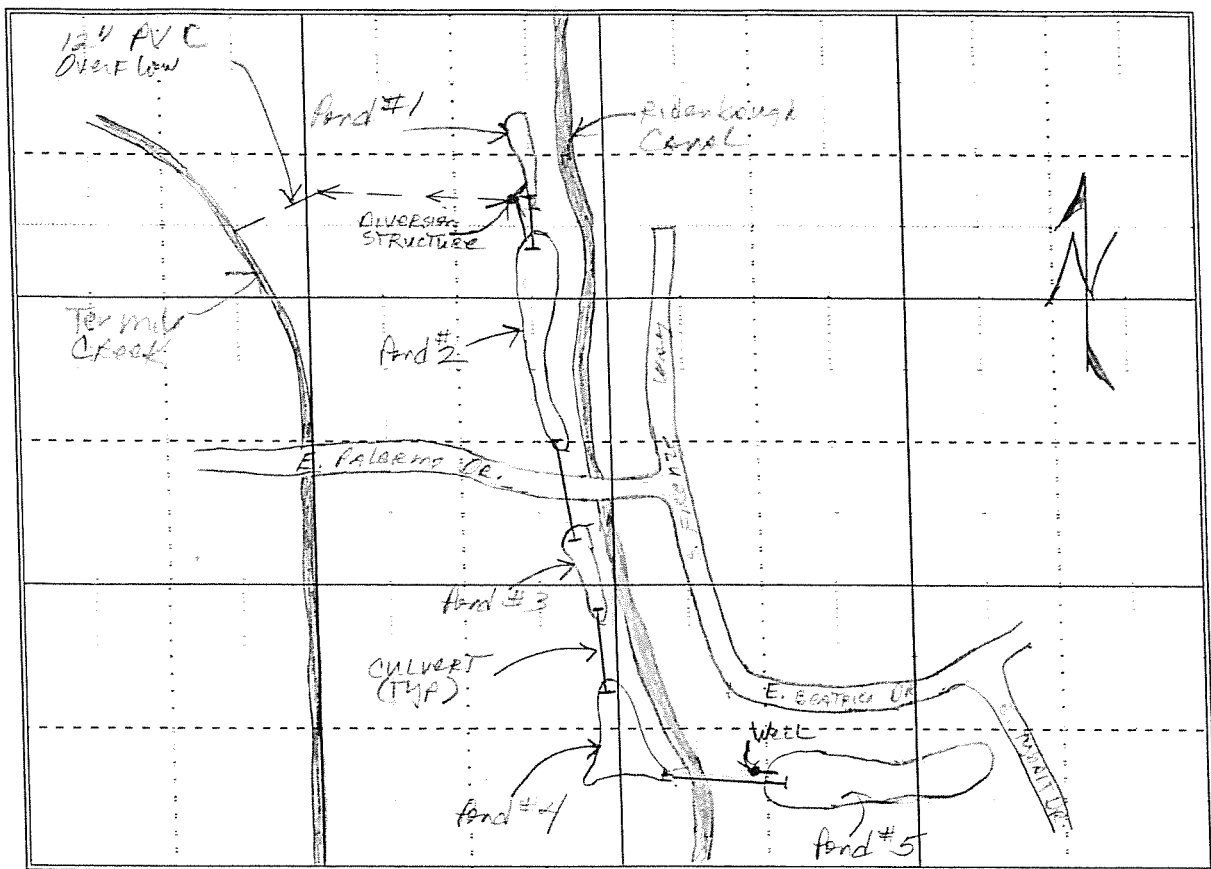
2. Recommended Amendments

~~___~~ 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 Rick Collingwood Date 7/26/12
Reviewer _____ Date _____

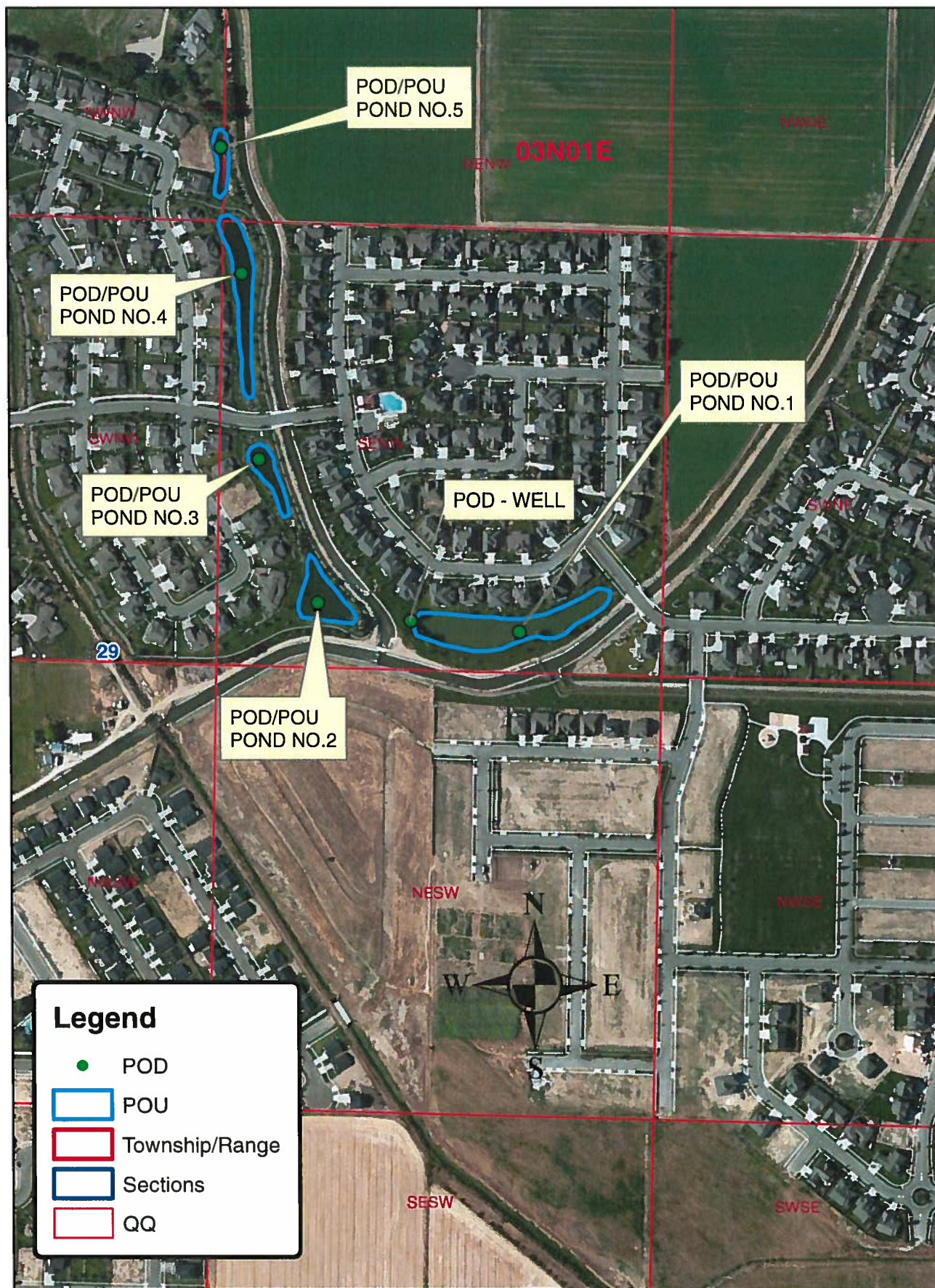
3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☐ see attached.



Scale: 1" = 500'

- ☐ 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

63-32052



4/2011

IDAHO DEPARTMENT OF WATER RESOURCES
FIELD EXAMINERS
WELL INSPECTION FORM

1. IDENTIFICATION # D 004645 (Tag #, etc.)

OTHER APPLICABLE # _____ (Water right #, etc.)

2. OWNER Tuscany Development, Inc. Phone (208) 888-9946
c/o Greg Johnson

Address P.O. Box 344 City Meridian

State ID Zip 83680 Email _____

3. WELL LOCATION (GPS required in Degrees Decimal Minutes – use PLS if GPS not available)

Lat. N. 1376938 Long. E. 2308832
~~2308832~~

Twp 3N Rge 1E Sec 29 $\frac{1}{4}$ SE $\frac{1}{4}$ NW

4. WELL CONSTRUCTION ☒ Well log attached ☐ Well log not found

Any obvious construction problems that may be a source for contamination or waste? ☐ Yes ☒ No

If yes, describe below &/or see attached (list any that apply): ☐ Photos ☐ Diagram ☐ Other

5. HYDROLOGIC INFORMATION

Static water if measured 35 ft. (well log) Water temperature if measured _____ °F

Flowing artesian ☐ Yes ☒ No Pressure if measured _____ psi

NOTES _____

INSPECTED BY Rick Collingwood DATE 5/30/12

FIELD EXAM PHOTOS

Water Right Permit: 63-32052

Field Exam Date: 5-30-12

PLS: NE1/4, NW1/4 Section 29, T.03N, R.01E.

Field Examiner: RC



Point of Diversion: Ground Water well located in landscape next to Pond No.1. Well runs continuously to maintain pond levels and movement of water for the interconnected ponds.



Point of Diversion/Place of Use: View southerly of Pond No.3.



Point of Diversion/Place of Use: View southeasterly of Pond No.5.



Point of Diversion/Place of Use: View northwesterly of Pond No.5. Concrete structure to the left is the pond system overflow structure. The overflow structure discharges into another concrete structure between Pond No.4 and Pond No.5, which discharges the pond overflow through a 12" diameter pipe to Ten Mile Creek.