

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-11770

Exam Date: 10/17/2012

1. Current Owner: SUTHERLAND FARM INC
C/O BRYCE HERGERT
P.O. BOX 191031
BOISE ID 83719
(208)599-0140
2. Accompanied by: Bryce Hergert
Phone No: (208)599-0140
Address: P.O. Box 191031, Boise, ID 83719
Relationship to Permit Holder: President of HOA

3. SOURCETRIBUTARY

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 63-11855, 63-11004, and 63-20506
2. Other water rights with the same point of diversion: 63-11855, 63-11004, and 63-20506

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

GROUND WATER NE1/4SW1/4 Sec. 21, Twp 03N, Rge 01E, B.M. ADA County

Method of Determination: GPS

2.

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
03N	01E	21	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
											26.0	16.0				24.0			66.0
											26					25			77

Total Acres: 66
77

Method of Determination:

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 Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge Size</u>
Drilling permit #63-92-C-158	Submersible	10			6-inch

*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>
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2. Measurements:

E. FLOW CALCULATIONS☒ Additional Computation Sheets Attached

Measured Method:

From WR#63-11855:

Theoretical pump flow rate (using 10 HP, 70% efficiency, 52 feet of lift, and 40 psi):
 $Q = (8.8 \times 10 \times 0.7) / (52 + (40 \times 2.31)) = 0.42 \text{ cfs (188 gpm)}$

The diversion rate to be licensed under this right will be limited to 0.42 cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \overset{77}{66} \text{ acres} \times \overset{4.5}{3.5} \text{ AF/acre} = \overset{347}{231} \text{ AF}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.42 \text{ cfs} \times 230 \text{ days} \times 1.9835 = 192 \text{ AF}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 192 \text{ AF}$$

2. Volume Calculations for Other Uses:

G. NARRATIVE/REMARKS/COMMENTS

This permit was field examined on 10/17/12 by myself, Craig Tesch, and Jennifer Cuhacyan of IDWR. The Sutherland Farm Home Owners Association (HOA) President, Bryce Hergert, accompanied us on the exam. This permit authorizes the diversion of ground water to supplement surface water irrigation. Surface water is delivered from the Ridenbaugh Canal to the Sutherland Farm HOA by the Nampa and Meridian Irrigation District through a pressurized system (verified via phone call to Nampa and Meridian Irrigation District on 1/23/2013). Supplemental ground water is supplied by a 222-foot, 12-inch well with a screened interval of 118-feet to 222-feet below ground surface; static water level is 42-feet below ground surface.

Water is currently pumped from the well and flows through a 6" buried PVC line where it travels west for 500 feet and is open discharged to a pond (pond #2 in WR#63-11855) adjacent to the Ridenbaugh Canal. This pumped water is then passed to the pressurized system from the pond to distribute water for irrigation. Water is used to irrigate landscaping, public areas, and lawns for a 100+ house subdivision over an approximately 10-acre area. The well is located in an empty lot at the intersection of East Easy Jet Dr and South Knapp Place near the storage pond and center of the subdivision. The 12-inch well for this right is also used for water right 63-11855 (wildlife and storage), 63-11004 (0.17 cfs transfer of irrigation, stockwater, and domestic), and 63-20506 (decreed domestic right).

The pump in the well has a 10 HP motor. The system was not running at the time of the field exam; however, a theoretical flow rate was calculated for this same pump for WR#63-11855. Flow was calculated using 10 HP, 70% efficiency, 52 feet of lift, and 40 psi resulting in a discharge rate of 0.42 cfs (188 gpm). Pump discharge is less than the requested diversion rate of 1.76 cfs.

Back in 1996, when Proof of Beneficial Use was submitted for this license, the area was not a subdivision and consisted of a farm known as Sutherland Farms (which is also now the name of the housing subdivision in its place) with livestock, a horse track, and cropland. Aerial photography from 2004 shows the farm owners were flood irrigating approximately 66 acres in the permitted POU. It also appears from the aerial photography that water was diverted from the pond by ditches to flood irrigate the fields, potentially by gated pipe. The 66-acre area will be used as the POU for this water right, with a diversion rate of 0.42 cfs.

On average, the owner now and historically has irrigated when needed during the irrigation season from March 15th through November 15th. Water that is released onto the property is consumptively used by vegetation or seeps into the subsurface. Overlapping water rights exist on the place of use including 63-11855, 63-11004, and 63-20506.

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

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	03/15 to 11/15	0.420 CFS	
<u>Totals:</u>		0.420 CFS	

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 Craig Tread Date 1/24/2013

Reviewer C. Smith Date 1-28-13

THEORETICAL PUMP EFFICIENCY CALCULATIONS

FILE: 63-11855

DATE: 29-DEC-94

COMPLETE BY: SANDY HEMENWAY

HORSEPOWER = 10

PUMP EFFICIENCY = 70%

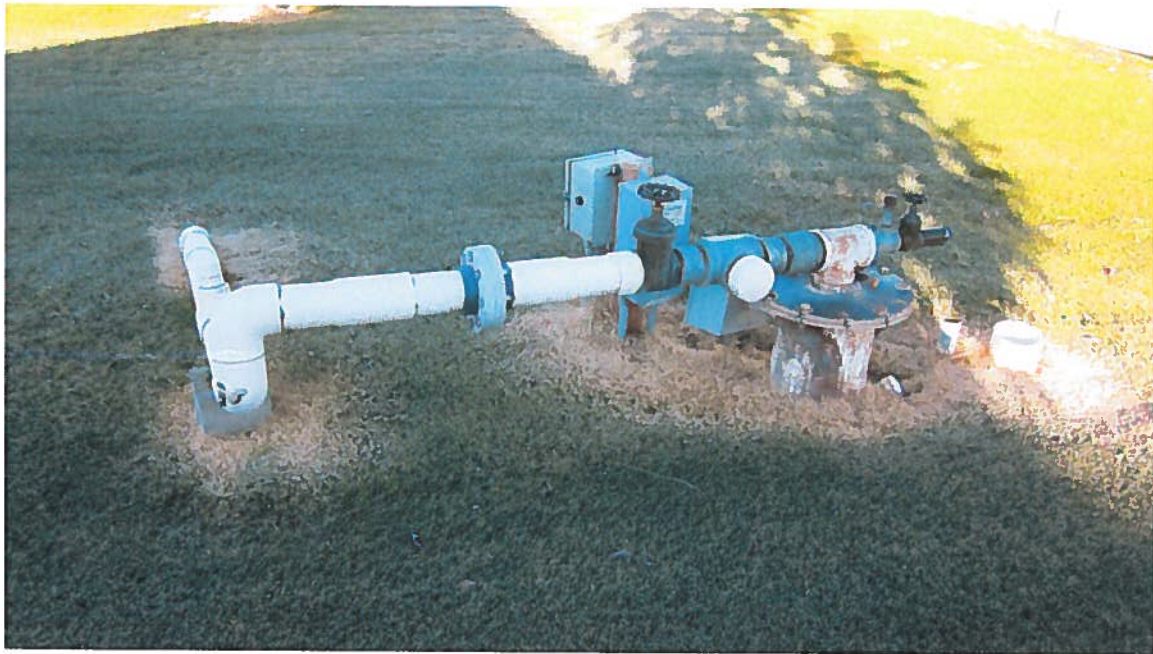
DYNAMIC LIFT = 52 FEET *42' static + 10'*

SYSTEM PRESSURE = 40 PSI *assumed non domestic + larger system*

QUANTITY = 0.42 CFS

MICROFILMED
DEC 20 1995

Photo taken by Craig Tesch on 10/17/2012



Licensed POD – Looking northwest at the 12-inch well (Drilling permit #63-92-C-158, no well tag number available) and power control boxes. Water is pumped to a pond for irrigation through buried pipes.



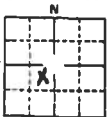
Site map – Location of water right features in the current subdivision using Google 2013 imagery. The POD (12" well), Ridenbaugh Canal, holding pond, and irrigation district shed are all in the same location as in 1996 when Proof of Beneficial Use was submitted and this was all farm ground.



STATE OF IDAHO
DEPARTMENT OF WATER RESOURCESPage 1 of 2
USE TYPEWRITER OR
BALLPOINT PEN

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources
within 30 days after the completion or abandonment of the well.

1. WELL OWNER Name <u>GIRDNER RANCHES</u> Address <u>3895 GIRDNER LN MERIDIAN 83642</u> Drilling Permit No. <u>63-92-C-158</u> Water Right Permit No. <u>63-11004</u>		7. WATER LEVEL Static water level <u>42</u> feet below land surface. Flowing? ☐ Yes ☐ No G.P.M. flow _____ Artesian closed-in pressure _____ p.s.i. Controlled by: ☐ Valve ☐ Cap ☐ Plug Temperature _____ °F. Quality _____ Describe artesian or temperature zones below.																																																																																															
2. NATURE OF WORK <u>NEW WELL</u> ☐ New well ☐ Deepened ☐ Replacement ☐ Well diameter Increase ☐ Modification ☐ Abandoned (describe abandonment or modification procedures such as liners, screen, materials, plug depths, etc. in lithologic log, section 9.)		8. WELL TEST DATA <u>NOT AVAILABLE</u> ☐ Pump ☐ Bailer ☐ Air ☐ Other _____																																																																																															
3. PROPOSED USE <u>IRRIGATION</u> ☐ Domestic ☐ Irrigation ☐ Monitor ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection ☐ Other _____ (specify type)		9. LITHOLOGIC LOG <u>082580</u>																																																																																															
4. METHOD DRILLED <u>REVERSE ROTARY</u> ☐ Rotary ☐ Air ☐ Auger ☐ Reverse rotary ☐ Cable ☐ Mud ☐ Other _____ (backhoe, hydraulic, etc.)		<table border="1"><thead><tr><th rowspan="2">Bore Diam.</th><th colspan="2">Depth</th><th rowspan="2">Material</th><th colspan="2">Water</th></tr><tr><th>From</th><th>To</th><th>Yes</th><th>No</th></tr></thead><tbody><tr><td>24</td><td>0</td><td>4</td><td>TOPSOIL</td><td></td><td>X</td></tr><tr><td></td><td>4</td><td>7</td><td>HARDPAN</td><td></td><td>X</td></tr><tr><td></td><td>7</td><td>24</td><td>CEMENTED GRAVEL</td><td></td><td>X</td></tr><tr><td></td><td>24</td><td>50</td><td>BOULDERS GRAVEL SAND</td><td>X</td><td></td></tr><tr><td></td><td>50</td><td>62</td><td>COARSE WHITE SAND</td><td>X</td><td></td></tr><tr><td></td><td>62</td><td>65</td><td>BRN CLAY</td><td></td><td>X</td></tr><tr><td></td><td>65</td><td>110</td><td>FINE TO CRSE SAND W/ PEA GRAVEL</td><td>X</td><td></td></tr><tr><td></td><td>110</td><td>116</td><td>BRN SANDY CLAY</td><td></td><td>X</td></tr><tr><td></td><td>116</td><td>155</td><td>MED TO CRSE SAND & GRAV</td><td>X</td><td></td></tr><tr><td></td><td>155</td><td>173</td><td>BRN SANDY CLAY</td><td></td><td>X</td></tr><tr><td></td><td>173</td><td>200</td><td>CRSE SAND & SMALL GRAV</td><td>X</td><td></td></tr><tr><td></td><td>200</td><td>207</td><td>BRN CLAY</td><td></td><td>X</td></tr><tr><td></td><td>207</td><td>220</td><td>CRSE SAND & GRAVEL</td><td>X</td><td></td></tr><tr><td></td><td>220</td><td>222</td><td>BRN SANDY CLAY</td><td></td><td>X</td></tr></tbody></table>		Bore Diam.	Depth		Material	Water		From	To	Yes	No	24	0	4	TOPSOIL		X		4	7	HARDPAN		X		7	24	CEMENTED GRAVEL		X		24	50	BOULDERS GRAVEL SAND	X			50	62	COARSE WHITE SAND	X			62	65	BRN CLAY		X		65	110	FINE TO CRSE SAND W/ PEA GRAVEL	X			110	116	BRN SANDY CLAY		X		116	155	MED TO CRSE SAND & GRAV	X			155	173	BRN SANDY CLAY		X		173	200	CRSE SAND & SMALL GRAV	X			200	207	BRN CLAY		X		207	220	CRSE SAND & GRAVEL	X			220	222	BRN SANDY CLAY		X
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5. WELL CONSTRUCTION <u>SEE ATTACHED</u> Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____ Thickness _____ Diameter _____ From _____ To _____ _____ inches _____ inches + _____ feet _____ feet _____ inches _____ inches _____ feet _____ feet _____ inches _____ inches _____ feet _____ feet Was casing drive shoe used? ☐ Yes ☒ No Was a packer or seal used? ☐ Yes ☒ No Perforated? ☐ Yes ☒ No How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun Size of perforation? _____ inches by _____ inches Number _____ From _____ To _____ _____ perforations _____ feet _____ feet _____ perforations _____ feet _____ feet _____ perforations _____ feet _____ feet Well screen installed? ☒ Yes ☐ No Manufacturer <u>ROSCOE MOSS</u> Type <u>VEE WIRE</u> Top Packer or Headpipe _____ Bottom of Tailpipe _____ Diameter _____ Slot size _____ Set from _____ feet to _____ feet Diameter _____ Slot size _____ Set from _____ feet to _____ feet Gravel packed? ☒ Yes ☐ No ☐ Size of gravel <u>3/8</u> Placed from <u>222</u> feet to <u>118</u> feet Surface seal depth <u>118</u> Material used in seal: ☐ Cement grout ☒ Bentonite ☒ Puddling clay ☐ _____ Sealing procedure used: ☐ Slurry pit ☐ Temp. surface casing ☒ Overbore to seal depth Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld ☐ Cemented between strata Describe access port <u>2" PIPE</u>		RECEIVED SEP 25 1992 Department of Water Resources Western Region Office RECEIVED OCT 21 1992 Department of Water Resources RECEIVED DEC 03 1992 Department of Water Resources																																																																																															
6. LOCATION OF WELL Sketch map location must agree with written location.  Subdivision Name _____ Lot No. _____ Block No. _____ County <u>ADA</u> Address of Well Site <u>GIRDNER LN</u> (give at least name of road) T. <u>3N</u> N ☐ or S ☐ NE <u>1/4</u> SW <u>1/4</u> Sec. <u>21</u> R. <u>1E</u> E ☐ or W ☐		10. Work started <u>8/28/92</u> finished <u>9/21/92</u>																																																																																															
11. DRILLER'S CERTIFICATION I/We certify that all minimum well construction standards were compplied with at the time the rig was removed. Firm Name <u>PETE COPE DRILLING</u> No. <u>213</u> Address <u>6505 W CHINDEN</u> Date <u>9/21/92</u> Signed by Drilling Supervisor <u>[Signature]</u> and <u>[Signature]</u> (Operator) <u>[Signature]</u> (If different than the Drilling Supervisor)		11.																																																																																															

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

Memorandum

Date: January 25, 2013

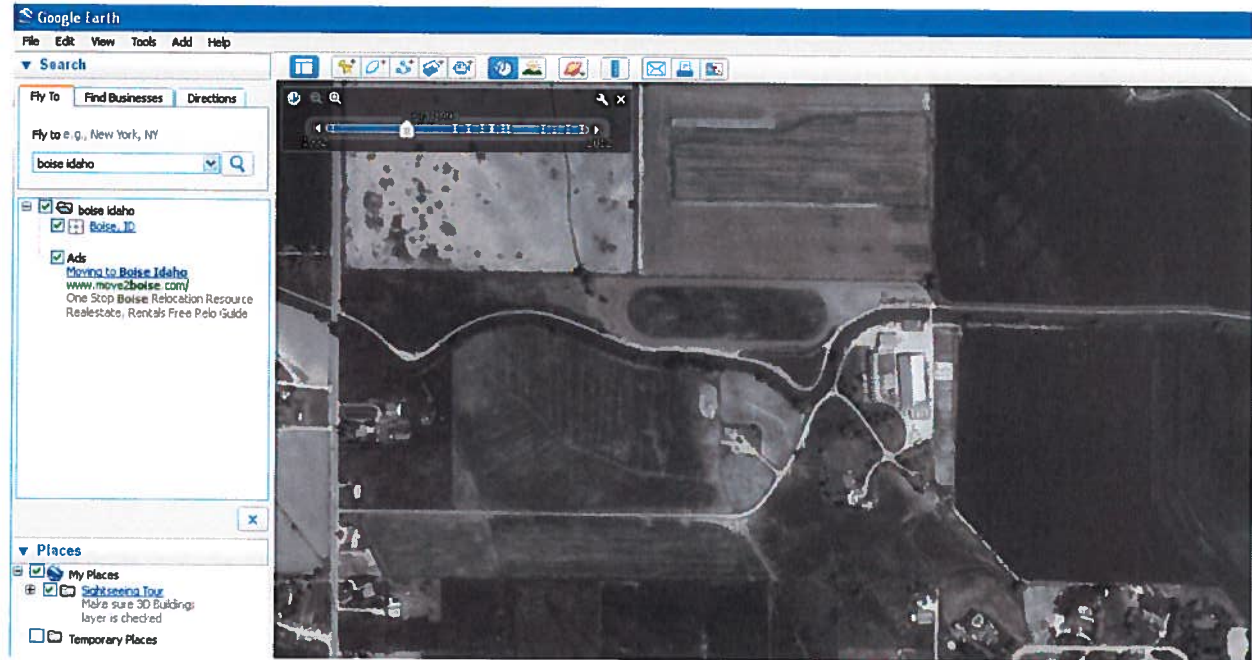
To: File 63-11770

From: Craig L. Saxton

Re: Supplemental review information: Permit 63-11770

Proof was submitted in 1996. The fields that existed at the time proof was submitted no longer exist. The area is all subdivided with houses. Google Earth had 1998 aerial photography available so the recommended irrigated acres is based on the 1998 photography.

1998:



Overlap:

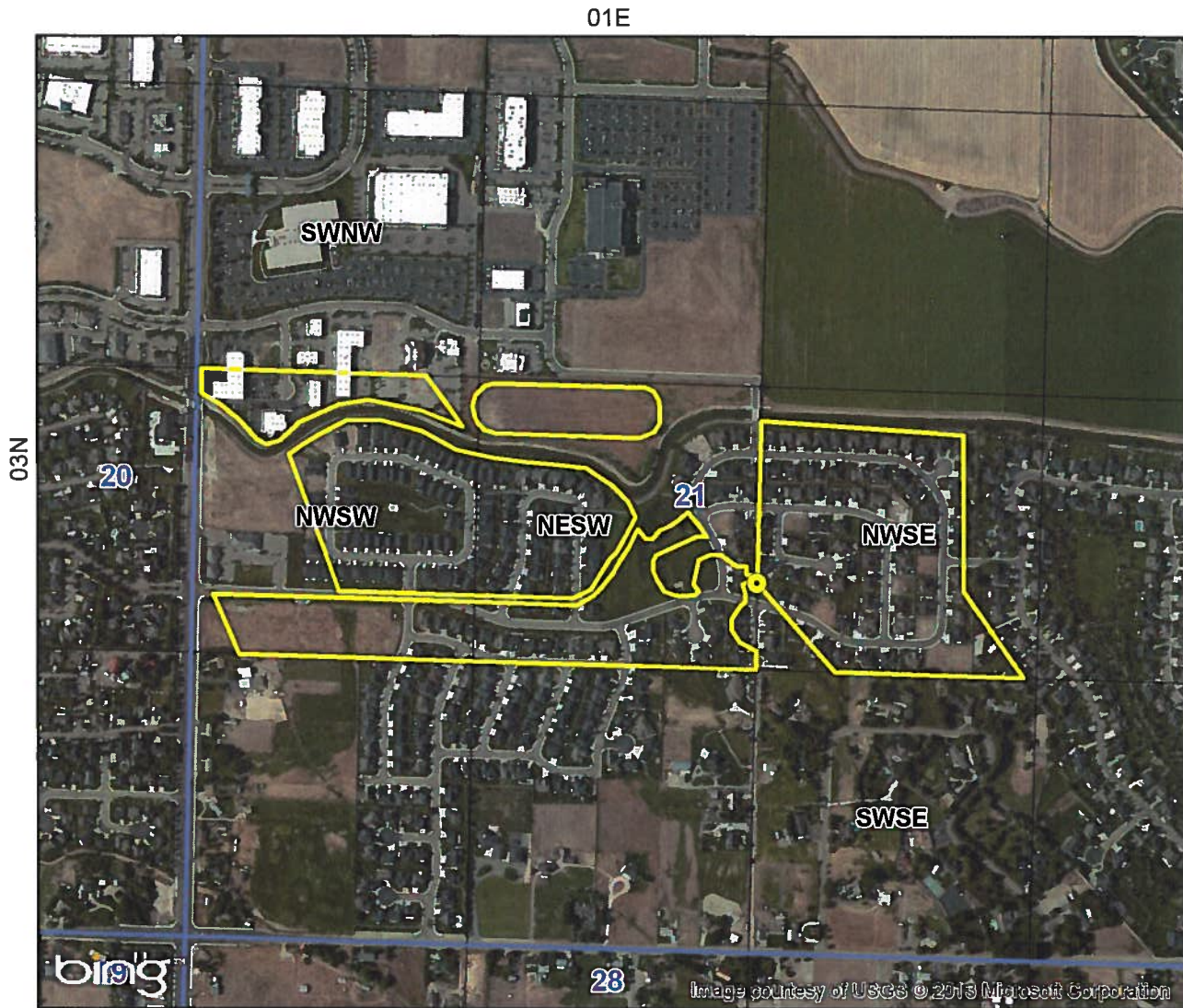
63-11004: For 2 acres of irrigation from the same POD as 63-11770, and is for area around the structures. The two acres covered under this right is not recommended as part of the POU for this right. No overlap.

63-11855: No irrigation use. Same POD.

63-20506: Domestic Use

State of Idaho
Department of Water Resources
Reference Map
63-11770

This map depicts the IRRIGATION place of use boundary developed in 1996 and drawn over Bing aerial photography.



-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters

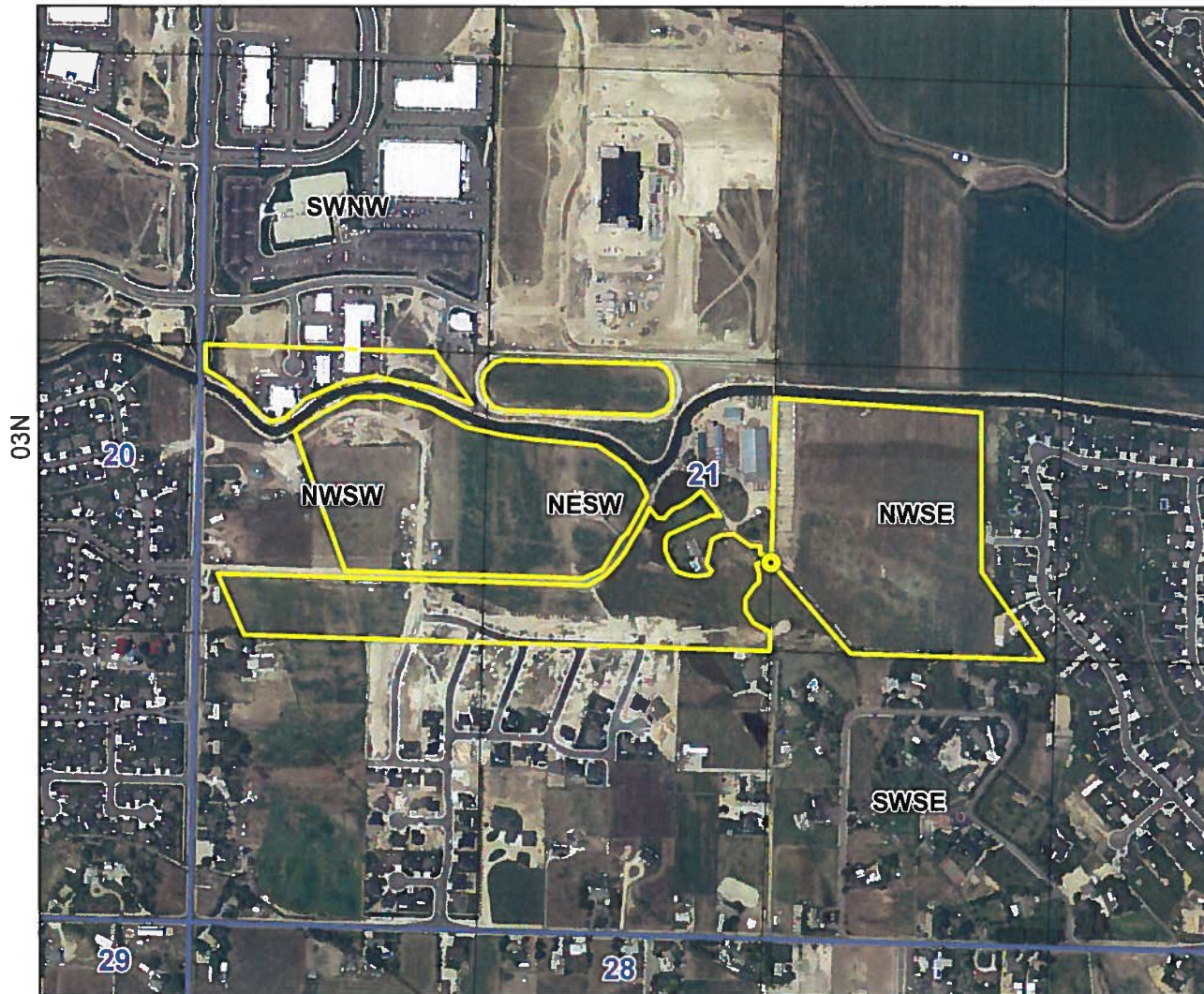
0 0.1 0.2 0.4 Miles



State of Idaho
Department of Water Resources
Reference Map
63-11770

This map depicts the IRRIGATION place of use boundary developed in 1996 and drawn over 2004 aerial photography.

01E



-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters

0 0.1 0.2 0.4 Miles

