

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 67-7816
Exam Date: 8/13/1996

1. Current Owner:
ROBERT C ROBERT AND NANCY ROSE ROBERTS
2109 NORTH 9TH ST BOISE ID 83702 208-454-1800
2. Accompanied by: This pond site not visited by field examiner.
Phone No:
Address:
Relationship to Permit Holder:

3. **SOURCE:**
UNNAMED STREAM

TRIBUTARY:
MONDAY GULCH CREEK

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:**

UNNAMED STREAMS NE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 18, Twp 14N, Rge 01W, B.M. ADAMS County

Method of Determination: Dam structure visible on satellite imagery. This structure is located within the digital PLSS boundary map described above.

2.

PLACE OF USE: STOCKWATER STORAGE and WILDLIFE 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	
14N	01W	18													X				X

Method of Determination: Pond visible on satellite imagery. The pond lies on the boundary of the digital PLSS map described above.

3.

Delivery System Diagram Attached (required). Indicate all major components and distances between components.

 X Indicate weir size/pipe as applicable.

 X Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.

 X Aerial Photo Attached (required for irrigation of 10+ acres).

 X Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size

*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

2. Measurements: None taken – Non flow right.

E. FLOW CALCULATIONS☐ Additional Computation Sheets Attached**F. VOLUME CALCULATIONS**

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 =$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} =$$

2. Volume Calculations for Other Uses:

The Section 18 pond measured a surface area of 1.5 acres using satellite imagery and ArcMap tools. Field exam report suggests a depth of 2.5 feet. This provides us with the calculation of Surface Area * Depth = Capacity

OR

$$1.5 \text{ acre} \times 2.5 \text{ ft} = 3.8 \text{ af}$$

Permit	10.6 af
B. U. Proof Fee	\$50 → 0.1 to 20.0 af
Pond Analysis	3.8 af
License Recommendation	3.8 af

G. NARRATIVE/REMARKS/COMMENTS

The field exam was conducted by Steve Lester of IDWR in August of 1996. The information presented in this report is a combination of his field observations and analysis tools that are used today to calculate pond volumes. The permit limit of 10.6 af does qualify for an in-office exam. But we can use some of Steve's findings to confirm the calculations.

Permit 67-7816 was filed to recognize a total of 2 ponds that appear to have already been built at the time they were applied for. The application for permit stated that the two ponds carried a capacity of 3.8 af and 6.8 af. This information was useful when recommending a total volume for both ponds. 67-7816 pond referred to as "West Side" while 67-15192 pond referred to as "East Side" in Steve's exam notes.

Permit 67-7816 was split to represent both ponds separately, under their own water right. This allows future land owners the ability to change ownership easily without dealing with a split in the future. This also helps describe each pond with their own unique condition that describes surface area and capacity.

The Section 33 pond (67-15192) has a surface area that is highly variable as shown by historical imagery. Imagery from 1987 to 1998 was used to match the development period of the permit. These images show differing pond levels depending on the season or water available. This also suggests that there are some significant shallow depths of the pond, at times represented by dry ground. For this calculation, a max capacity of 6.8 af and surface area of 5.6 acres was used to estimate a depth of 1.2 feet. Again, the 6.8 af matches what was suggested by the application for permit, and the consumptive use should be applied for in a future application for permit.

The Section 18 pond (67-7816) has a surface area of 1.5 acres. Steve's notes indicates a depth of 2.5 ft. This calculates to a capacity of 3.8 af which matches information on the application for permit. Variations in pond levels were not as prevalent in the 1987-1999 imagery as it was in the Section 33 pond, providing for a more consistent value.

The permit does not allow consumptive uses or evaporation to be considered, as it wasn't when it was permitted. This should be applied for in a future application for permit to match today's storage standards.

OWNERSHIP: John Keppinger applied for and is the original owner to permit 67-7816. A number of assignments for permit were received over the years. In 1995, John Keppinger assigned the permit to Karl and Joan Lester. The Lesters gave the permit to C 1031 Properties Inc in 2000. In 2010, ownership changed from C 1031 Properties to Howard and Cynthia Jones. The Jones then assigned the **portions** of 67-7815 and 67-7816 to the Roberts and a portion to WT Ranch. Lands pertinent to Section 33 remained in the name of Jones. Finally in 2016, Jones assigned all of 67-7815 and 67-7816 to Mark and Susan Thompson's Trust. At that time, they did not own all of these rights since portions of the permit had been assigned to WT Ranch and the Roberts in 2010. However the Jones were still able to assign the Section 33 pond to the Thompsons. The 2016 ownership change does not mean anything to the Section 18 pond since the Roberts own this part of the permit. Current ownership of the land according to county taxlot data suggests Robert and Nancy Roberts own the property relevant to the Section 18 pond and the license should reflect this per the 2010 ownership change.

Have conditions of permit approval been met? X Yes No

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
STOCKWATER STORAGE	01/01 to 12/31		3.8 AF
WILDLIFE STORAGE	01/01 to 12/31		3.8 AF
<u>Totals:</u>			3.8 AF

2. Recommended Amendments

 Change P.D. as reflected above Add P.D. as reflected above X None

 Change P.U. as reflected above Add P.U. as reflected above X None

I. AUTHENTICATION

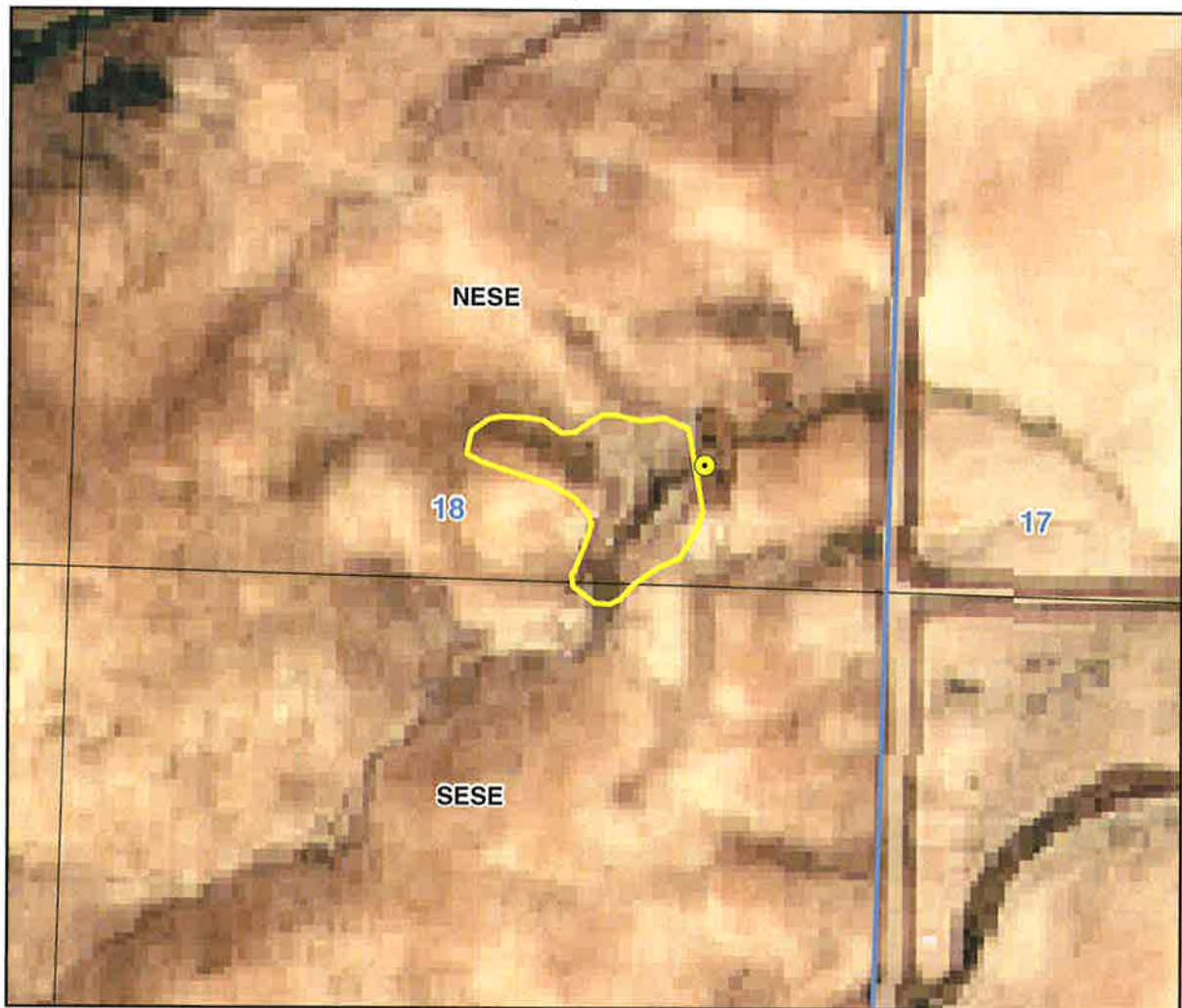
Field Examiner's Name Steve Lester Date 8-13-96

Reviewer Patricia Kelly Date 12-22-17

67-7816

01W

14N



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

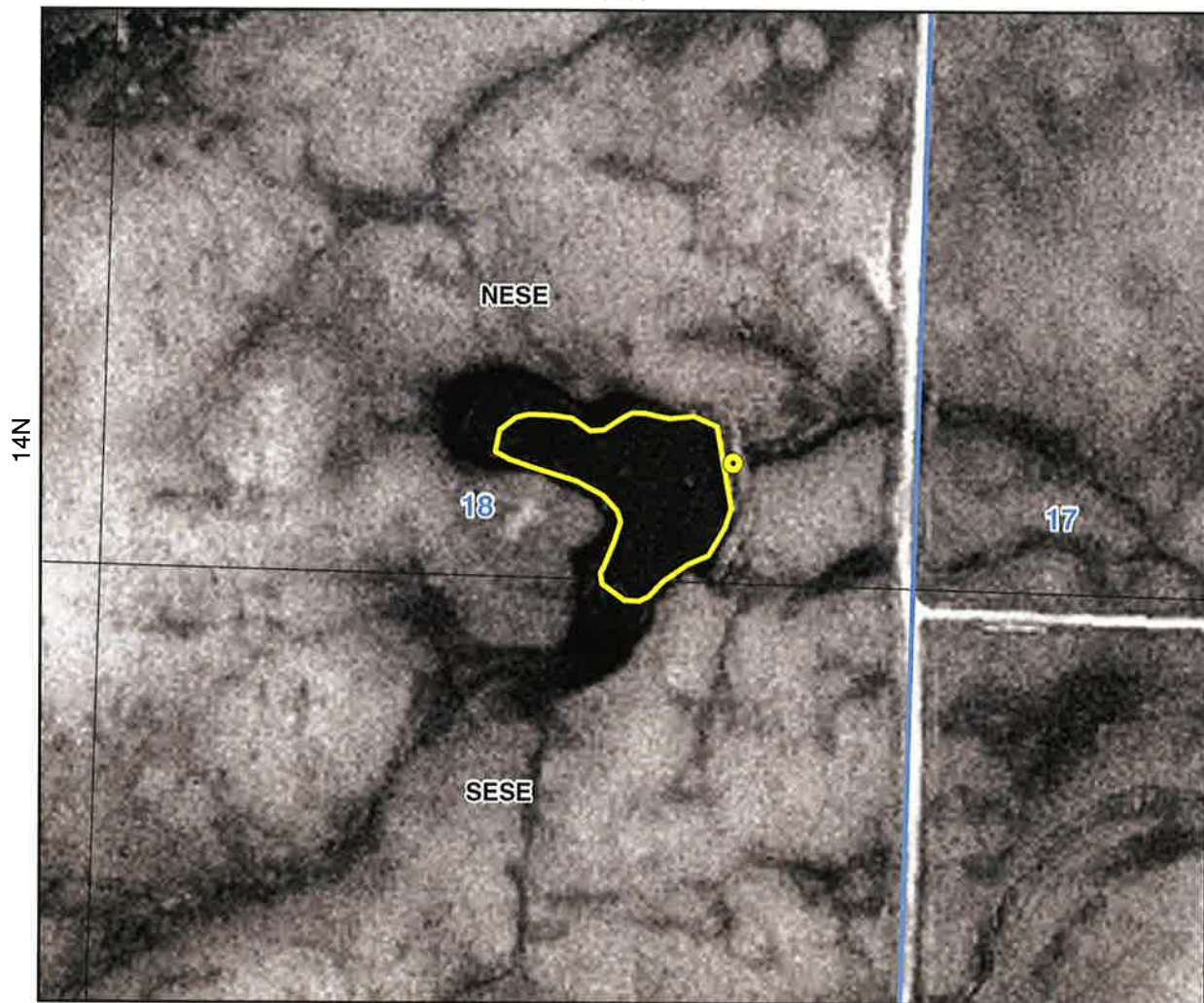
0 0.035 0.07 0.14 Miles

1987 Image



67-7816

01W



0 0.035 0.07 0.14 Miles

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

1998 Image



Seepage Loss Calculations

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total annual seepage losses from a pond.

FILE NUMBER	67-7816 (Sec 18 Pond)
REVIEWER	Patrick Kelly
DATE	12/21/2016

User Input
Calculated value
Formula Explanations

INPUTS

Pond Surface Area (AC.)	1.5	AC.
-------------------------	-----	-----

Pond Surface Area (SQ. FT.)	65340	SQ. FT.
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My Soil Classification is	On Stream	
Suggested Seepage Rate (FT./DAY)	0.0000	FT./DAY

Formula: (Surface Area X Seepage Rate) X 7.48 = Gallons Per Day Loss
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Convert to GPD	0	GPD
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Total Seepage Loss (AFA)	0.0	AFA
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Though sand and gravel seepage rates may actually be higher, the maximum allowable rate is 0.2 ft/day, pursuant to Administrative Memo "Seepage Loss Standards for Ponds and Reservoirs."

Suggested Seepage Rates for Different Soil Types:

GW, GP, GM, GC, SW, SP and SM (silty sand, sand silt mixtures and gravel mixtures) = **0.2 ft per day**

OL and ML (inorganic silts - very fine sands, silty, or clayey fine sands) = **0.02 ft per day**

SC (clayey sands, sand clay mixtures) = **0.007 ft per day**

CL (Low to medium plasticity clays) = **0.003 ft per day**

MH, OH, PT and CH (high plasticity clays) = **0.0003 ft per day**

LINED PONDS (liners can be chemical, fabric, or bentonite) = **0 ft per day**

Ponds Intercepting Groundwater (excavated ponds filled by ground water) = **0 ft per day**

PLEASE NOTE: The initial basis for the Suggested Seepage Rates in the table above is found on Page 16 of Seepage from Fish Ponds, Bulletin 599, August 1989 Alabama Agricultural experiment Station, Auburn University, Auburn University Alabama. If you don't know the soil type, please refer to the map provided at <X:\Spatial\Soils\USCS\PondSoils.lyr>. Use "0" if the pond fill relies on the water table.

Evaporation Loss Calculations

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the annual evaporation losses from a pond.

FILE NUMBER	67-7816 (Sec 18)
REVIEWER	Patrick Kelly
DATE	12/21/2016

User Input
Calculated value
Formula Explanations

The acronyms used on the Kimberly Research Center website are defined below:
P = Precipitation
ET= Evapotranspiration
P _d = Precipitation deficit
P _d =ET-P

USING THIS SPREADSHEET

Use the link below to access the Kimberly Research Center website. This website provides the Precipitation Deficit for a station most representative of the pond under examination. The Precipitation Deficit is the total amount of free water surface evaporation minus the precipitation for a given area, which gives the total amount of evaporative losses incurred by the pond. There are several weather sites that are used throughout the state. IDWR staff can find the nearest site using Arc Map. The shape file containing the sites can be found at X:/Spatial/Climate/ETIdahostations.shp.

Instructions:

1. Use the link below to navigate to ET Idaho 2012.
2. Select the station which is most representative to your pond location.
3. Click Submit Query.
4. Under "Land Covers with Evapotranspiration Estimates," select "Open Water - Shallow Systems (ponds, streams)" or "Open Water - small stock ponds" depending on the pond size.
5. Click the link to "Precipitation Deficit."
6. Reference and copy (ctrl + C) the first subheading "Mean" values.
7. Click the "Paste Values from ET Idaho" button. The table will automatically enter a zero (0) for any negative precipitation deficit values.

Found at: <http://data.kimberly.uidaho.edu/ETIdaho/>

Precipitation Deficit

Station: Cambridge (NWS - 101408)

Month	mm/day ¹	Days per month	mm/Month
Jan	-1.98	31	0.00
Feb	-1.49	28	0.00
March	-0.04	31	0.00
April	1.72	30	51.60
May	2.20	31	68.20
June	3.18	30	95.40
July	4.27	31	132.37
August	3.58	31	110.98
September	2.23	30	66.90
October	0.69	31	21.39
November	-1.77	30	0.00
December	-2.80	31	0.00

Total mm/year = 546.84

PLEASE NOTE: The seasonal average for precipitation deficit should not be used for calculations because precipitation often exceeds evaporation during wetter months of the year. If the pond is kept full, excess precipitation during wetter months does not serve to refill the pond during drier months.

For example, see Sandpoint KSPT (NWS -- 108137), the annual precipitation deficit is -106 mm. However, April through September have positive precipitation deficit values. To properly estimate the annual volume of water necessary to refill a pond due to evaporation losses, the table will automatically enter a zero (0) for each month that the precipitation value is reported as a negative value.

As described above, precipitation offsets evaporation in winter months, so the net effect is that wintertime precipitation deficit is usually zero.

$$((\text{mm/yr}) \div (\text{convert to feet})) \times (\text{Surface area of pond, in acres}) = \text{Evaporation Loss in Acre Feet}$$

(546.84 ÷ 304.8) X 1.50 = 2.7 AFA

Total Storage Calculations

FILE NUMBER	67-7816 (Sec 18 Pond)
REVIEWER	Patrick Kelly
DATE	12/21/2016

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.

User Input
Calculated value
Formula Explanations

Surface Area (AC.)	1.5	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	2.5	"Average Pond Depth" depicts the actual depth of the pond either measured or estimated. Note: If you know the maximum depth and not the average depth, the Field Examiner's Handbook suggests multiplying the maximum depth by 0.4 to get the average depth, or you can use any method that seems reasonable to attain average depth.
Pond Capacity (AF)	3.75	Pond Capacity is calculated by multiplying the Pond Surface Area by the Average Pond Depth. If you know the capacity, divide the capacity by surface area and enter the average pond depth in the space above. <i>Note: If pond capacity is determined using a method shown on the "Pond Capacity" sheet, the user may need to modify the value of "Pond Capacity" (cell B9) manually. Note that if the value is modified manually, the formula will be altered for future use.</i>
Multiple Fill Volume Above Initial Fill to Fulfill From Storage Needs- "Multiple Fills" (AF)	0	The "Multiple Fill Volume Above Initial Fill" is the acre-feet of water required to meet a <i>from storage</i> component if the <i>from storage</i> component exceeds a one time fill. This section should not include the amount of water needed to fill the pond initially or the amount of water needed to maintain the pond level due to evaporation or seepage. For example: if a pond has a capacity of 5 acre feet and 2.5 acre feet of seepage and evaporation, but the pond is used for irrigation that requires 10 acre feet of from storage for the irrigation use, then you would insert 5 acre feet into this location (10 acre feet needed - 5 acre feet from the initial fill = 5 acre feet of additional storage needed). <i>Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.</i>
Estimated Seepage Loss (AF)	0.0	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	2.7	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	6.4	The "Total Volume Required" is calculated by adding the Pond Capacity, Multiple Fills, Seepage Loss, and Evaporation Loss amounts to determine the total amount of storage required.

*
PERMITS 67-7815 & 67-7816

CALL UP 12/1/2010 TO RESOLVE LICENSING OR RELINQUISHMENT ETC.

**PROBABLY REPLACE SOME/ALL OF DEVELOPMENT W/ NEW APPLS RE
COMPLICATIONS – CAUTION ABOUT ANY ISSUES W/ TRIB WATER IN WD #67!!**

Multiple calls from Creed Noah, realtor for past sales & maybe more pending sales, finally settled on this approach:

Multiple owners make it hard to split up 0.04 cfs stockwater in 67-7815.

Probably ok to split 67-7816 since 2 pond sites under 2 owners, maybe enough water in that permit/license to split?

Creed will see if current permit owner (corporation¹) is available & willing to relinquish 67-7815 since multiple unconnected springs, separate owners & minor cfs ... splitting & licensing for several separate systems will result in minimal amounts of water in each license.

Probably best to replace 7815 with several new appls, 1 appl per 1 system. Springs sink + minor stock use avoids WD #67 issues. Minor ponds associated at springs should be ok. The details of pond area & capacity will matter. *67A Little Weber River*

If 7815 not relinquished, license it & cc current landowners when mail – summarize the situation and recommend replacement appls for 7815 even if 7815 remains as “paper right.”

1996 fx visit covered “east side” w/ G. Lester (no relation) but not “west side” (Weber?). Found mostly small ponds at springs, a few where pipe & trough instead of pond.

2 1/2' deep e. stream info
→ Estimate area of pond on ASCS photo in NESW S33 (marked #6 in pencil on ASCS photo), assume about 4 or 5 ft average depth, check af storage re split idea w/ west side unexamined pond in S18.

See Records Memo #*9*, pg 14 about new owners for permit re licensing – if cannot track down current permit holder C 1031 Properties Inc. Might help w/ any licensing for new owners.

¹ Assigned to C 1031 Properties Inc. just for selling property, Creed said company never owned land & probably does not exist anymore for more assignments w/ splits or relinquishment etc. He will try to contact company & will provide results of search.

* Same date e d'base 8/13/1996 ... Actually incomplete

① 67-7815, 67-7816

by Gene Lester (not related)

New Address Po Box 83 Carlson Valley 83622
259-4305

- Both fully assigned to him but only owns part of them:

→ "East side" = East of boundary gulch

"West side" = Elaine Weber (confirm with addresser)

- 7815 sprays .04 cfs multiple r. hrs

- 7816 runs streams 10.6 cfs ponds, 2 ponds

- Both approved for disinterested developments (similar to SERBA

Approved for common owner, common usage & same general area)

- How split whatever found into separate systems for separate licenses? What about separate owners?

↑ especially 7815 since only .04 cfs

new new rights to cover some/most of this?

e Lester "East side"

- no stock, only wildlife

← use for calculations

- ponds Average depth c 5' (except Site #6)

- " mostly onstream in draws (no div. to storage)

- " Earth/rock dams

- site # ... per user record pencil notes, + use this to make an exact map of findings

- no other measurements made (mostly could not measure)

Site 1 S6S6S6 S.38

- spray, 36° upriver culvert, 1" pipe buried to adjacent pond (pond, see site 2)
- pipe plugged, can't measure
- photo #1

← 1 = Div to Storage
2 = Storage

Site 2 S6S6S6 S.38

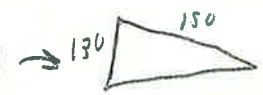
- pond seen on Aser photo
- use scale " " to estimate area
- photo #2

for ponds
1 mile ~ 600'
5' deep (coverage)

1 Development so ok combine under 1 coverage

Site 3 NENE NE S.33

- pond 130 x 150 x 5 (triangle) → 130 150
- on stream, no div. to storage
- photo #3



also

Site 4 NENE NE S.33

- pond 200 x 100 x 5
- c 1/8 mile upstream from ②
- photo #4

POND POU
33 SE NWE
←
33 SE NENE
←

1 Development & 2 ponds, close, same draw, ok under 1 coverage

Site 5 NW SW S.33

- pond, dimensions from aerial photo
- day today
- photo #5

on stream pond



③ Site 6 NESW S. 33

- large pond seen on Aerial photo, irregular shape
- much shallower so use $\approx 2\frac{1}{2}'$ depth
- mostly dry today
- photo #6

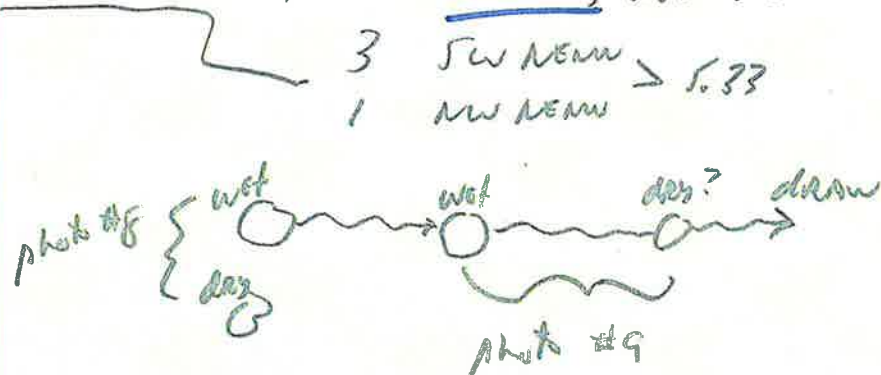
↗ Outstream pond

(wants Aerial well here to keep pond up, maybe pipe to other ponds, it can - Needs new work it do)

Site 7 NW N65E S. 33

- 5p. pond, 1" pipe, tough
- minor flow, not really worthy of measurement
- photo #7

Site 8 4 ponds outstream, Stone draw = 1 development



4 ponds
total size about
about same as
Site 4 pond,
triangle shapes

Site 9 SESE SW S. 28

- see bottom layer at East side Aerial photos
- use for pond dimensions, 5' deep
- outstream pond
- photo #10



(4)

Site 10 NENW 5.33

- pond just south of in field labeled 2/4.2 on aerial photo
- different owner (?)
- photo # 11

Outstream pond

- similar to site 3 pond
for size

Site 11 NENW 5.32

- springbox, 1" pipe, tough
- did not measure
- photo # 12

Site 10, 12, 13

Site 12 SW NE 5.32

- pond above #11 but not same ~~then~~ drain, not common development
- dry today
- outstream pond
- typical small pond similar to #3 re dimensions
- no photo

Site 13 SW SE 5.28

- outstream pond
- site labeled "x spring" on aerial photo
- typical small pond, same method & dimensions as in #12
- photo # 13

Sites 1-13 "East side of morning gulch"



NOTES (not part of ~~exam~~ report)

- gr 11/5/13

FIND DEVELOPMENT AT
PLS IN PERMIT

SITE #

67-7815

67-7816

1

2

3

NEENE S.33
pond

4

5

6

NESE S.33
pond

7

NWNESE S.33
trough

8

9

SESESW S.28
pond

10

11

NEENE S.32
trough

12

13

So 1, 2, 4, 5, 8, 10, 12, 13 found at PLS not in either permit

• 67-7816 10.6 AF ponds (2)... could be 2 ponds if ≤ 10.6 AF

• 67-7815 0.04 cfr total but Appl mentions "catch basins",
implies some stock ponds:

.04 x 2 ~ .08 ~ .1 AF storage could be covered @
24 hr fill idea in licensing w/o storage b.c. terms

→ WHICH PERMIT COVERS WHAT DEVELOPMENT? WHICH CATCHES?

— continued —

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS



67-7815 e .04 cfs

- Assume license as much natural flow at sites found in permit
- then see if anything else can be included
- site 3 & 11 spring, pipe & trough at both
- About 1 mile apart, split permit for .02 cfs/each, issue 2 licenses, 1 per site for total .04 cfs
- permit "used up", nothing left to be covered
e 67-7815

67-7816 e 10.6 af

- site 6 e 7 acres (ASCS photo) x $3\frac{1}{2}$ deep (exam map)
 $V = 17.5$ af, exceeds permit, too big

East
side

West
side

- not examined yet
- different owners

? Examine West side pool, see if can license under
67-7816, see if permit can include anything else.

Anything licensed. See how fits with pending photo:

Just to let ranch

" " Roberts

Anything not licensed - need new permits, 1 per system,
could file pool & license them upon approval





August 13, 1996

Field Exam 67-7815

WRA Steve Lester



August 13, 1996

Field Exam 67-7815

WRA Steve Lester



August 13, 1996

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