

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 77-14323

Exam Date: 9/30/2011

1. Current Owner: ROBERT S DODGE
PO BOX 754
MC CALL ID 83638-0754
(208)634-6868

And/Or

DUANE B SMITH
PO BOX 754
MC CALL ID 83638-0754
(208)634-6868

2. Accompanied by: Robert Dodge
Phone No: (208)634-6868
Address: PO Box 754, McCall, ID 83638
Relationship to Permit Holder: self

3. **SOURCE**

SOUTH FORK SALMON RIVER

TRIBUTARY

SALMON RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 77-7335 (low producing spring source, domestic internal uses for L13 and 14, and irrigation for Lots 11 – 14 and part of the same lower landing strip; 77-7362 South Fork Salmon River source domestic internal/external use for Lots 12 – 14 not to exceed ½ acre irrigation. ***Use under right 77-14323 was diminished by the amount necessary to avoid any redundancy of water rights, due to the above water rights not being relinquished or abandoned. (See attachment)

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

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

SOUTH FORK SALMON RIVER NE1/4NE1/4 Sec. 6, Twp 23N, Rge 08E, B.M. IDAHO County

Method of Determination: Garmin GPS map 76S, 2009 and 2011 ArcMap, and H.E.S. No. 701.

2.

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
23N	08E	6	.5			1.0													1.5

Total Acres: 1.5

Method of Determination: Garmin GPS map 76S, 2009 and 2011 ArcMap, and H.E.S. No. 701.

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>
A0016943	Honda	5.5	GX160-5678		2 inch discharge

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

D. FLOW MEASUREMENTS1. **Measurements:**Theoretical:

$$(8.8 \times 5.5 \text{ Hp} \times 0.7 \text{ eff}) / [10 \text{ ft lift} + (45 \text{ psi} \times 2.31)] = 0.30 \text{ cfs}$$

Physical Measurement: Rain Bird Maxi Paw Model #2045A (#7 black high performance nozzle):

$$14 \text{ nozzles (at 1 time @ 45psi)} \times 3.18 \text{ gpm} = 44.52 \times 0.00223 = 0.10 \text{ cfs}$$

$$1.5 \text{ acres} \times 0.03 \text{ cfs/acre} = 0.05 \text{ cfs}$$

RECOMMEND: 0.05 cfs**E. VOLUME CALCULATIONS**

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 1.5 \times 3 = 4.5 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.05 \times 230 \times 1.9835 = 22.8 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 4.5 \text{ af}$$

RECOMMEND: 4.5 af**F. NARRATIVE/REMARKS/COMMENTS**

2 inch screen intake from the South Fork of the Salmon River running approximately 150 ft to the lockable pump house. 5.5 Hp Honda GX160-5678 pump with 2 inch discharge to 2 inch buried PVC that then splits and runs south and north with 1 inch going to each house and shop where a riser is located (for attaching hoses and misc nozzles), and 2 inch line running west then splitting and converting to 3 inch buried PVC (for additional storage) running south to north with risers (used for irrigation and fire protection). The entire grounds contain 3 zones. At the time of the field examination, 14 RainBird Maxi Paw Model #2045A nozzles (black #7) ran at one time at 45 psi (10 ft lift).

Quarter-quarter determination was made by extending the quarter-quarter lines completely down, confirming that the POU was in the NENE not the NWNE, and SENE. The POD was determined to be in the NENE, and not the NWNE.

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

196 There is >100 ft of 2 inch buried PVC (straight length) that can be easily accessed to install a measuring device.

195 The pump is locked in the pump house when not used, otherwise someone is always present if irrigation is taking place.

029 There is a Screened intake at the South Fork of Salmon River.

G. 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 10/31	0.050 CFS	4.50 AF
	<u>Totals:</u>	0.050 CFS	4.50 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

H. AUTHENTICATION

Field Examiner's Name

Judy Hemmenway Date 2/13/2012

Maxi-Paw™ / Maxi-Paw SAM Performance					
Pressure psi	Nozzle	Radius ft.	Flow gpm	■ Precip In/h	▲ Precip In/h
25	● 06	-	-	-	-
	● 07 LA	22	1.5	0.60	0.69
	● 07	32	2.2	0.41	0.48
	● 08	35	2.8	0.44	0.51
	● 10 LA	25	3.4	1.05	1.21
	● 10	38	4.2	0.56	0.65
	● 12	39	5.5	0.70	0.80
35	● 06	37	2.0	0.28	0.32
	● 07 LA	23	1.9	0.69	0.80
	● 07	37	2.7	0.38	0.44
	● 08	38	3.3	0.44	0.51
	● 10 LA	29	4.0	0.92	1.06
	● 10	41	4.8	0.55	0.64
	● 12	42	6.3	0.69	0.79
45	● 06	38	2.3	0.31	0.35
	● 07 LA	25	2.1	0.65	0.75
	● 07	39	3.0	0.38	0.44
	● 08	40	3.7	0.45	0.51
	● 10 LA	31	4.5	0.90	1.04
	● 10	42	5.4	0.59	0.68
	● 12	44	7.1	0.71	0.82
55	● 06	38	2.5	0.33	0.39
	● 07 LA	25	2.3	0.71	0.82
	● 07	41	3.3	0.38	0.44
	● 08	41	4.1	0.47	0.54
	● 10 LA	32	5.0	0.94	1.09
	● 10	43	6.0	0.62	0.72
	● 12	45	7.9	0.75	0.87
60	● 06	38	2.6	0.35	0.40
	● 07 LA	25	2.4	0.74	0.85
	● 07	41	3.5	0.40	0.46
	● 08	42	4.2	0.46	0.53
	● 10 LA	32	5.4	1.02	1.17
	● 10	44	6.4	0.64	0.74
	● 12	45	8.4	0.80	0.92

Maxi-Paw™ / Maxi-Paw SAM Performance						METRIC
Pressure bar	Nozzle	Radius m	Flow m³/h	Flow l/m	■ Precip mm/h	▲ Precip mm/h
2.0	● 6	-	-	-	-	-
	● 07 LA	6.8	0.38	6.0	16	19
	● 7	10.4	0.55	9.0	10	12
	● 8	11.0	0.68	11.4	11	13
	● 10 LA	8.1	0.83	13.8	25	29
	● 10	11.9	1.01	16.8	14	16
	● 12	12.3	1.32	22.2	18	20
2.5	● 6	11.3	0.46	7.8	7	8
	● 07 LA	7.1	0.44	7.2	17	20
	● 7	11.4	0.62	10.2	10	11
	● 8	11.7	0.76	12.6	11	13
	● 10 LA	8.9	0.92	15.6	23	27
	● 10	12.5	1.11	18.6	14	16
	● 12	12.9	1.45	24.0	18	20
3.0	● 6	11.5	0.51	8.4	8	9
	● 07 LA	7.5	0.47	7.8	17	19
	● 7	11.8	0.67	11.4	10	11
	● 8	12.1	0.83	13.8	11	13
	● 10 LA	9.4	1.01	16.8	23	27
	● 10	12.8	1.21	20.4	15	17
	● 12	13.3	1.59	26.4	18	21
3.5	● 6	11.6	0.55	9.0	8	9
	● 07 LA	7.6	0.50	8.4	17	20
	● 7	12.2	0.72	12.0	10	11
	● 8	12.4	0.89	15.0	12	13
	● 10 LA	9.6	1.09	18.0	23	27
	● 10	13.0	1.30	21.6	15	18
	● 12	13.6	1.72	28.8	19	21
4.0	● 6	11.6	0.58	9.6	9	10
	● 07 LA	7.6	0.54	9.0	18	21
	● 7	12.5	0.78	13.2	10	11
	● 8	12.7	0.94	15.6	12	14
	● 10 LA	9.8	1.19	19.8	25	29
	● 10	13.3	1.42	23.4	16	19
	● 12	13.7	1.86	31.2	20	23

Precipitation rates based on half-circle operation

■ Square spacing based on 50% diameter of throw

▲ Triangular spacing based on 50% diameter of throw

Performance data collected in zero wind conditions

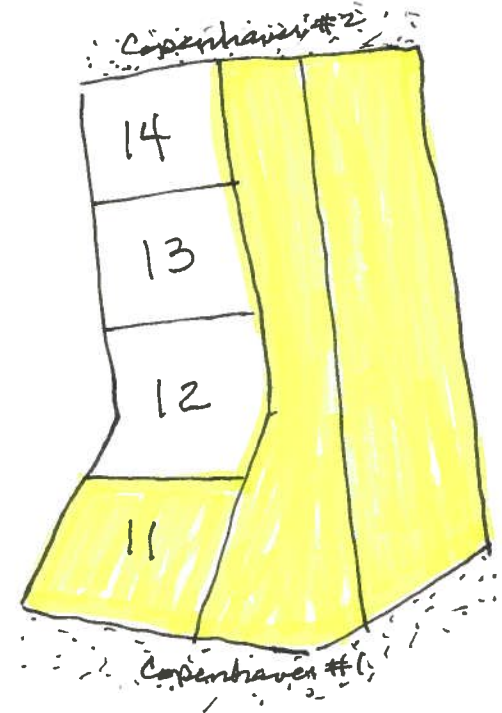
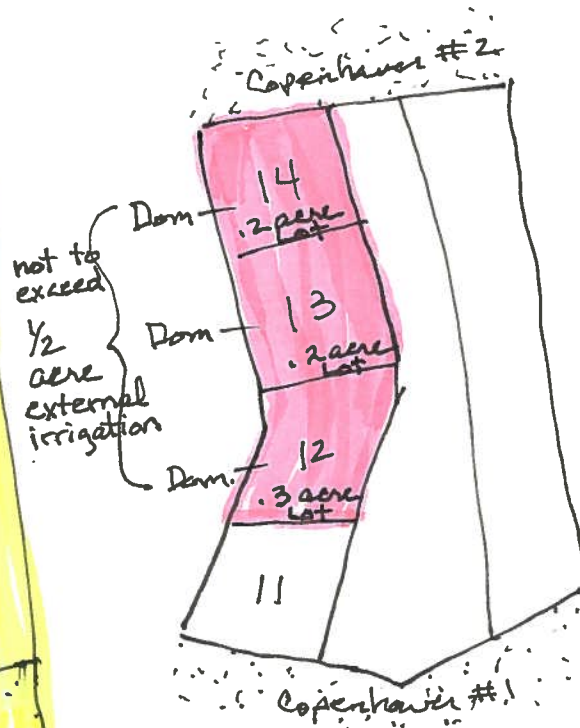
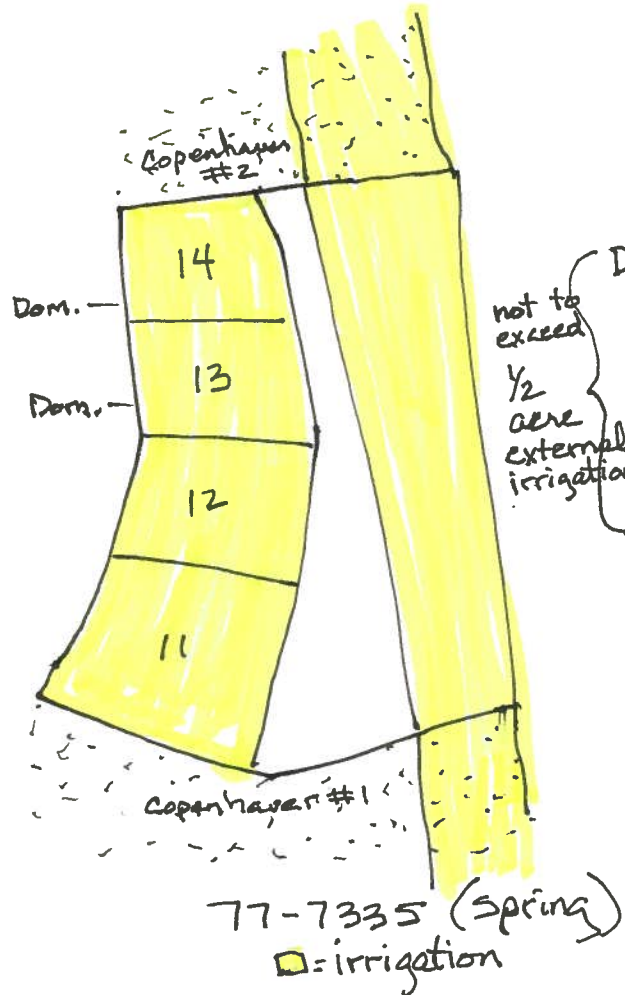
Performance data derived from tests that conform with ASAE Standards; ASAE S398.1.

See page 224 for complete ASAE Test Certification Statement.

POU OVERLAPS

Water Right	Irrigation	Domestic	Lot 11	Lot 12	Lot 13	Lot 14	Landing Strip	cfs	af
77-7335 (Spring)		X			X	X		0.02	1.2
77-7362	X (3.0 acres)		X	X	X	X	X	0.02	9
77-14323	X (2.1 acres) <i>before overlap consideration</i>		X	X	X	X	X	0.06	2.4 <u>1/2 ACRE</u>

some of the same acreage
as 77-7335



77-14323 Dodge

S. Hemmings

ORIGINAL

Survey accepted May 2, 1921
General Land Office

Plat of
**HOMESTEAD
ENTRY SURVEY**

No. 536

in the
IDAHO

NATIONAL FOREST

Approximate
Sections 5, 6, Unsurveyed
T. 23N., R. 8E.

of the
**BOISE BASE AND MERIDIAN,
IDAHO.**

This plat of Homestead Entry Survey
No. 536 State of Idaho is
strictly conformable to the field notes
thereof on file in this office, which
have been examined and approved.

U.S. Surveyor General's Office
Boise, Idaho, April 13, 1921.

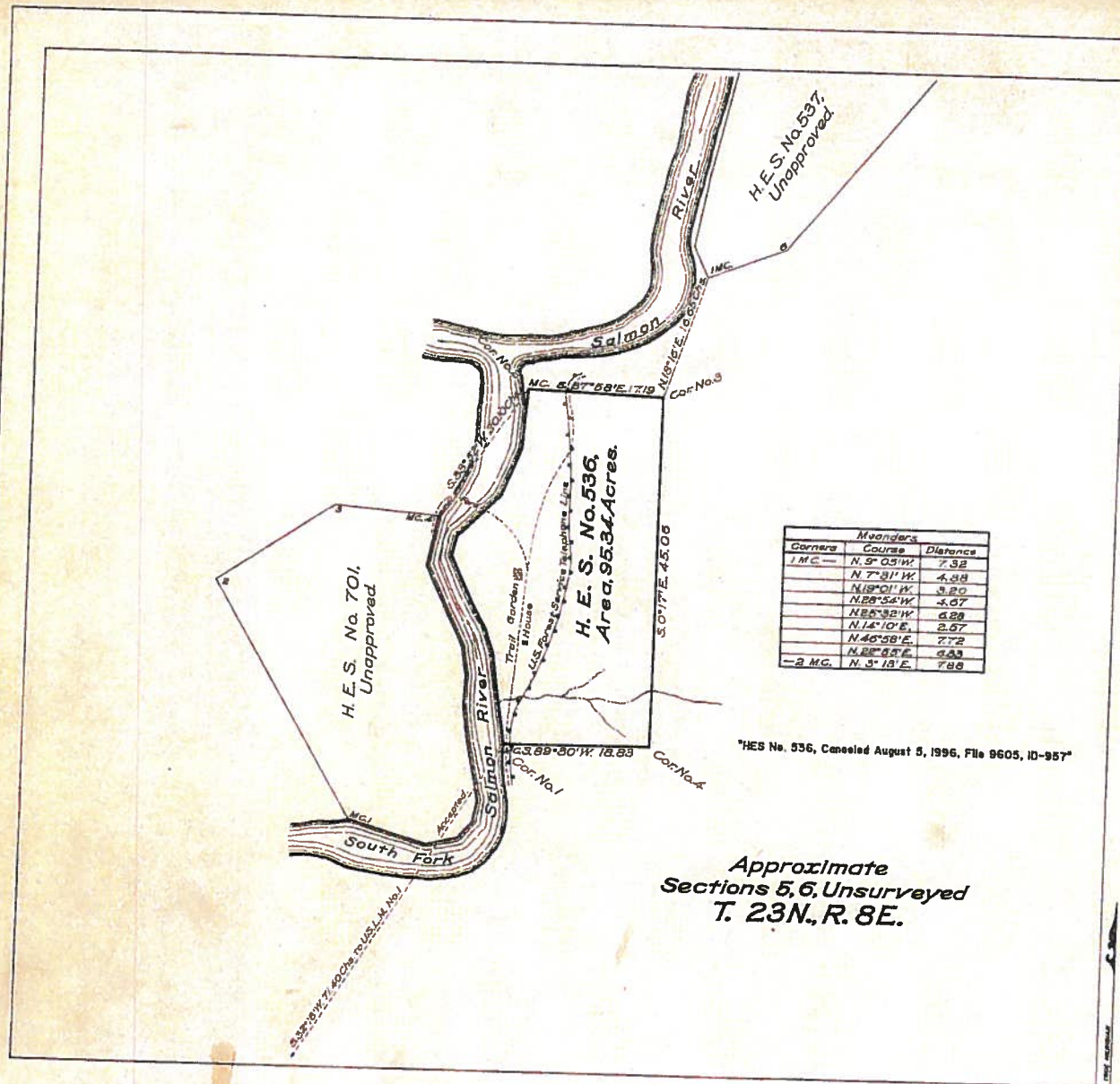
Edward Hendon
U.S. Surveyor General

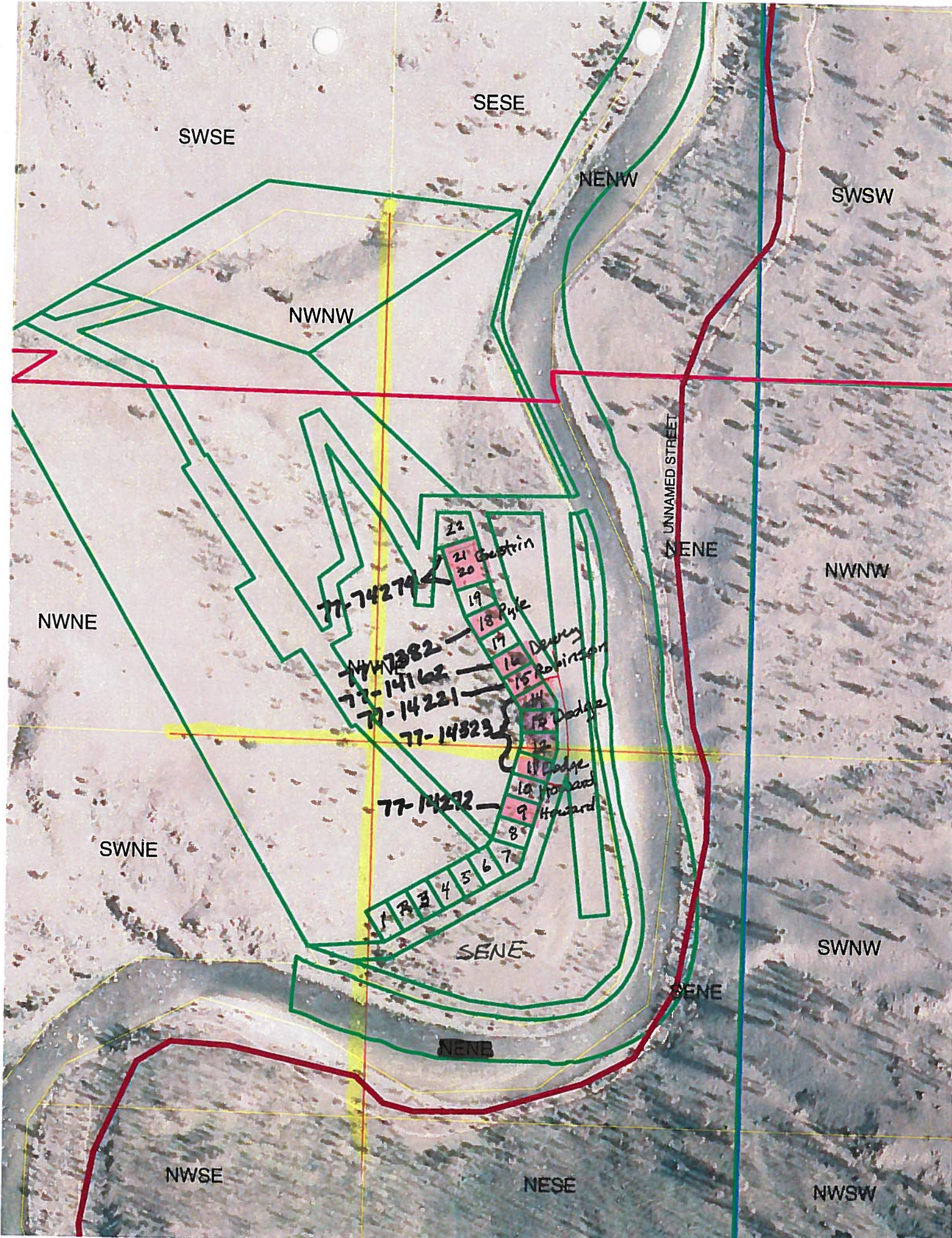
SCALE: 10 chains to 1 inch

Survey Designated	By whom Surveyed	Inst. Cont. Group		When Surveyed		Date of Approval
		No.	Date	Began	Completed	
H. E. S. No. 701	Marshall S. Wright	701	January 15, 1919	September 22, 1920	September 24, 1920	
H. E. S. No. 537	Marshall S. Wright	537	February 28, 1919	September 22, 1920	September 24, 1920	April 7, 1921
H. E. S. No. 536	Marshall S. Wright, Sur. U.S. Forest Service	536	February 28, 1919	September 22, 1920	September 24, 1920	April 13, 1921

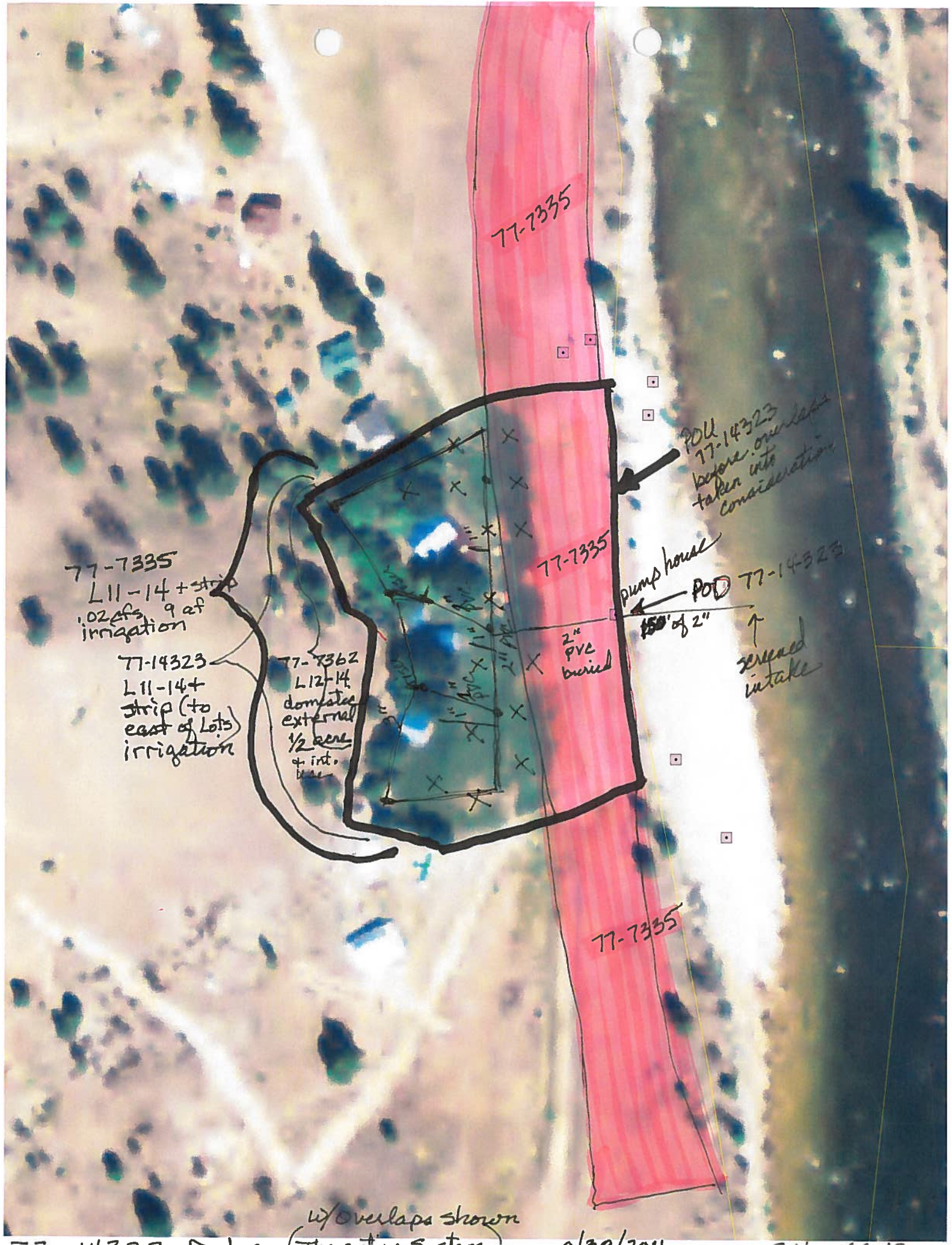
Areas in Acres	
H. E. S. Survey No. 536	Contents
In Section	
In Section	
In Section	
Total	95.34

Ad of June 11, 1906	Ad of May 30, 1920
List No. 4-873	Dated May 11, 1910
List No. 4-1735	Dated May 1, 1915
Latitude 45° 21' 45" N.	Observations
Longitude 115° 30' 07" W.	Near House
Magn. Mag. Decl. 20° 40' E.	





77-14323 Dodge Quarter-Quarter Determination



77-7335
L11-14+ strip
1.02 acs, 9 ac
irrigation

77-14323
L11-14+
strip (to
east of Lots)
irrigation

77-7362
L12-14
domestic
external
1/2 acre
+ int.
base

77-7335

77-7335

77-7335

POU
77-14323
before overlaps
taken into
consideration

pump house

POD 77-14323

2" PVC
buried

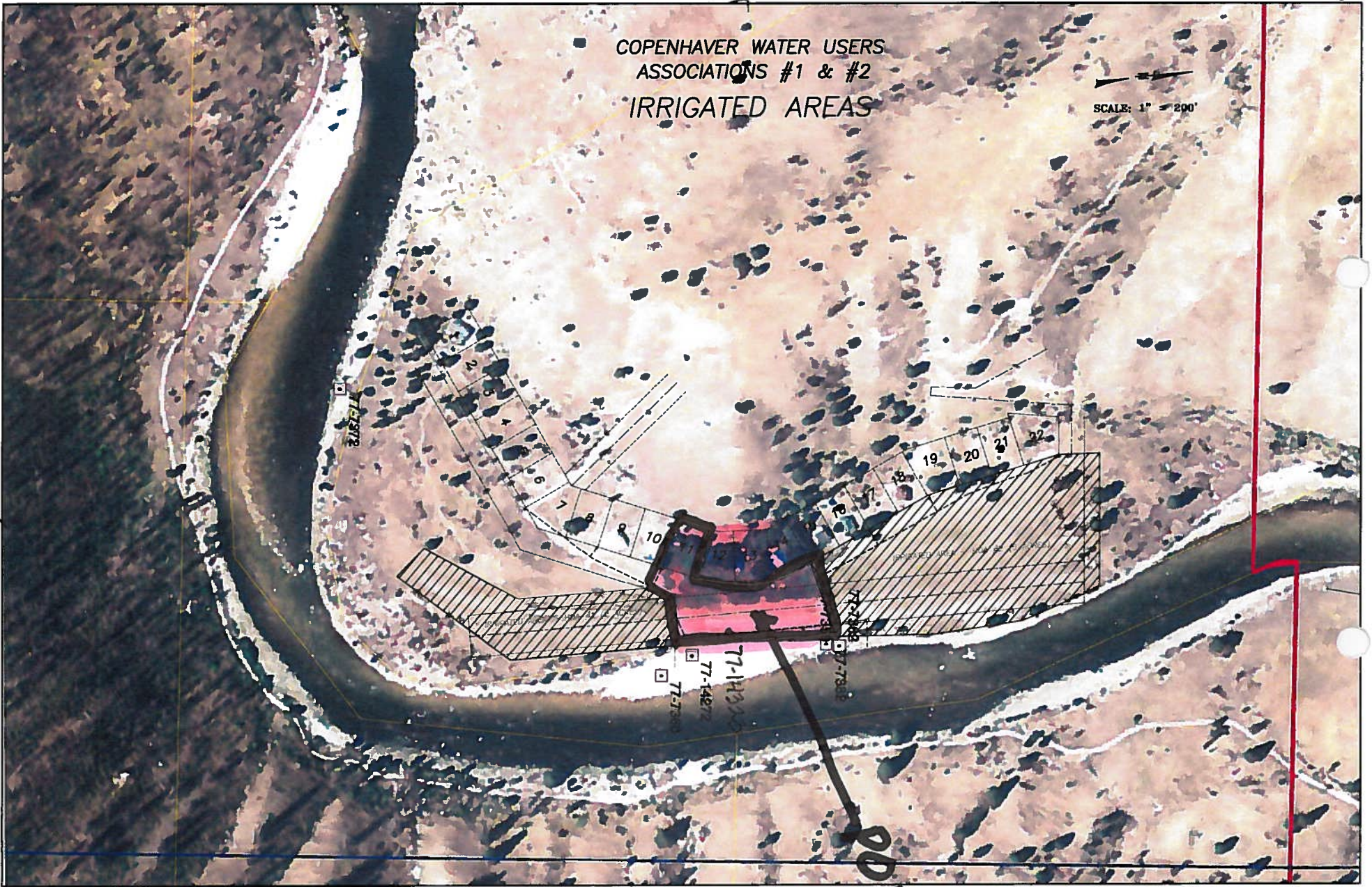
150' of 2"

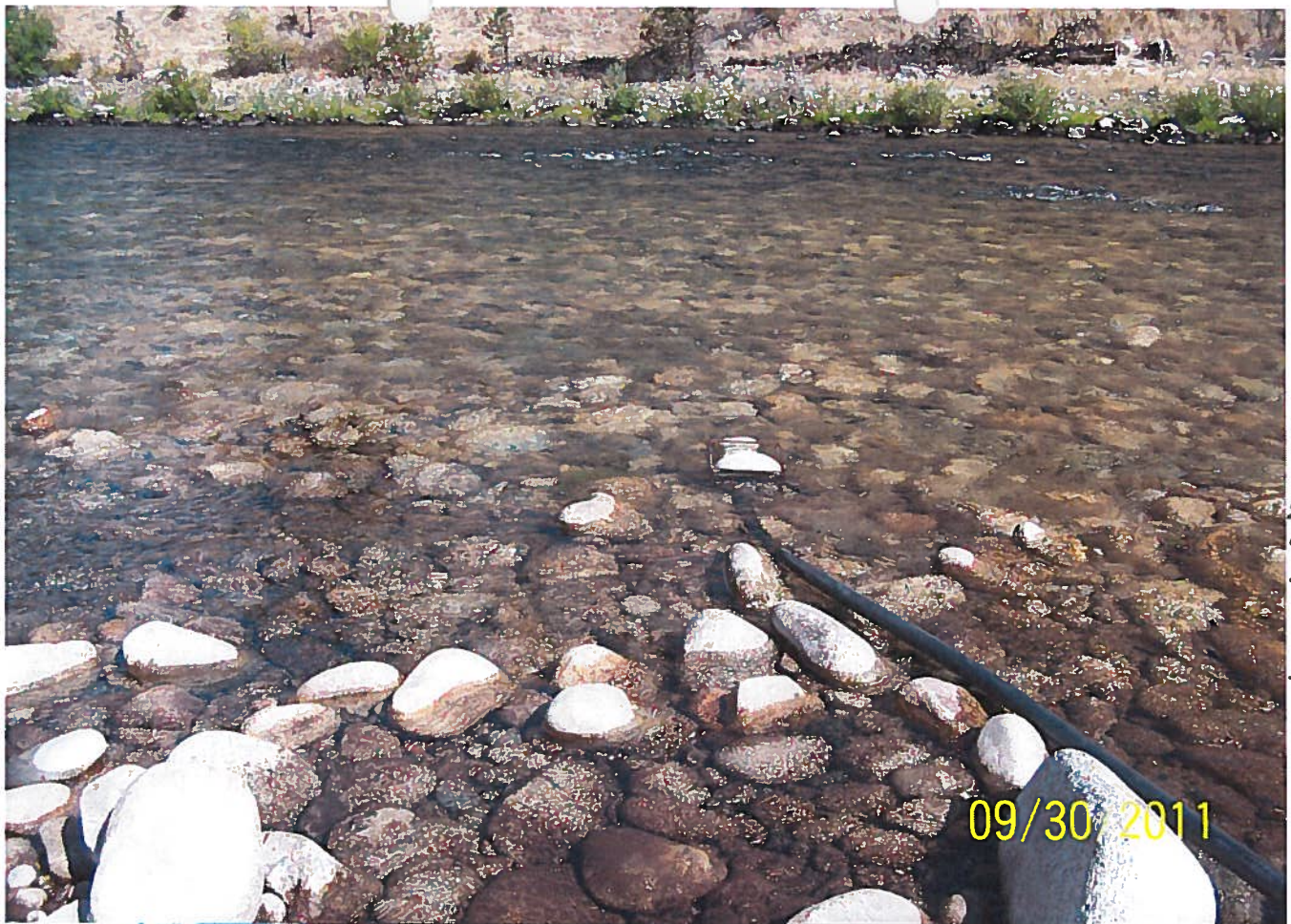
↑
screened
intake

w/ overlaps shown

77-14323 Dodge Pol (not on Copenhagen's system)

77-14323





Screen
intake
in the
S. Fork
of the
Salmon
River
2" poly
to
pump

09/30/2011

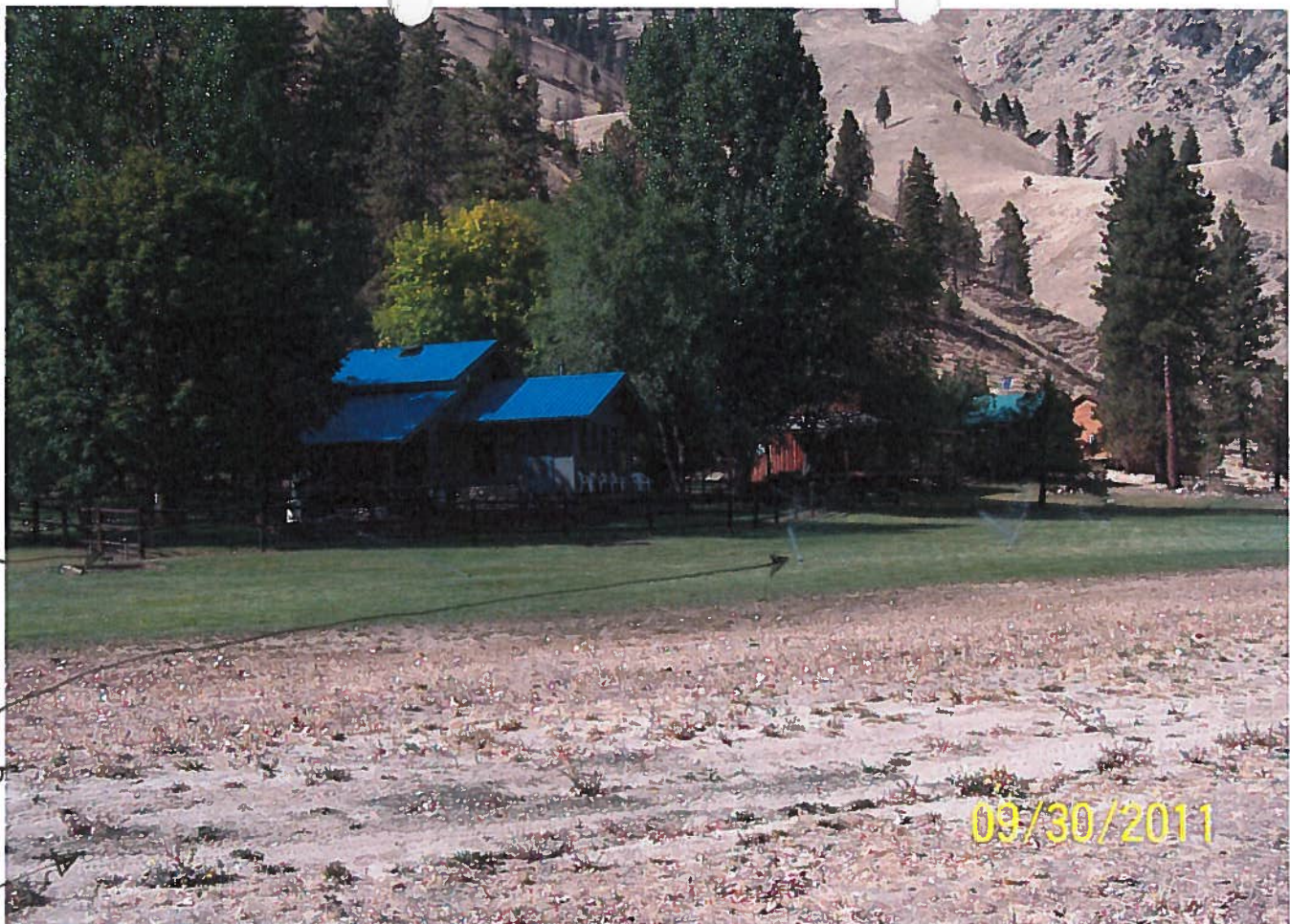


Lockable
pump
house
with
5.5 Hp
Honda
GX160
5678
Honda
2"
dischar
to 2"
buried
PVC

09/30/2011

77-14323 Dodge

S. Hemenway

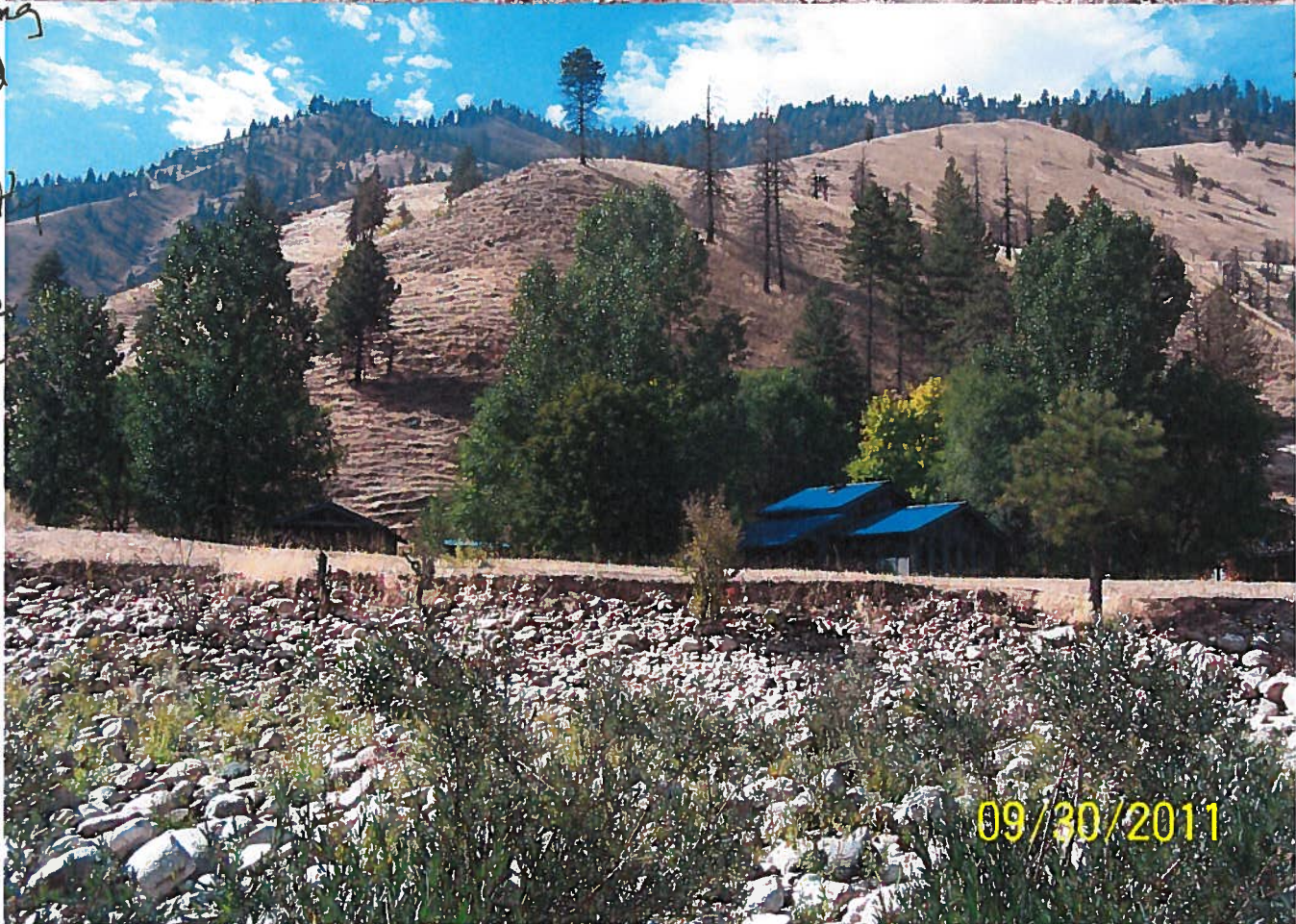


2" riser

airbird
Maxi Bu
2045A

rest
of landing
strip
irrigated
but not
as
frequent
as the
50' fire
barrier
around
the
houses

POU:
2" buried PVC, that reduce to 1" going + riser at each home (2 home + 1 ques house + shop). 2" PVC change to 3" runner north + south o west board w/riser for fire protecti
3 zone
14 rainli
Maxi Bu
2045A
run at
1 time
at 4:30p
(10' left,



10' left