

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 77-14328

Exam Date: 9/30/2011

1. Current Owner: COPENHAVER WATER USERS ASSN #2 INC
C/O SCOTT ACKER
PO BOX 70
MC CALL ID 83638
(208)634-6711
Email: sasecesh@citlink.net
2. Accompanied by: Brian Howard
Phone No: (208)467-4230
Address: 2607 Sienna Dr., Nampa, ID 83686
Relationship to Permit Holder: Scott Acker gave permission for Brian to be the contact person; Brian is the president for Copenhagen Water Users Assn. #1. Email: dental@fiberpipe.net

3. SOURCE

SOUTH FORK SALMON RIVER

TRIBUTARY

SALMON RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 77-14162 (this is for domestic internal, 77-7377 (Lots 19 domestic internal use only. This is a low producing spring source that shares 0.02 cfs and 3.6 af with Lots 1, 6, 15, 16, 19 and 21 domestic internal only). 77-7335 irrigation on a portion of the lower landing strips (Brian Howard said that 77-7335 was only used for irrigation of L11 – 14 and the landing strip directly to the east of these lots, that the Dodges used that water).
2. Other water rights with the same point of diversion: The following water rights use the same POD and the same distribution as Copenhagen Water Users Assn #2: 77-14221, 77-14162, 77-74274.

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

SOUTH FORK SALMON RIVER NE1/4NE1/4 Sec. 6, Twp 23N, Rge 08E, B.M. IDAHO County
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 – 2011 ArcMap, and Homestead Entry Survey (H.E.S #701)

2.

PLACE OF USE: IRRIGATION

TwP	Rge	Sec	NE				NW				SW				SE				Totals
23N	08E	6	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	5.0

Total Acres: 5

PLACE OF USE: DOMESTIC

TwP	Rge	Sec	NE				NW				SW				SE				Totals
23N	08E	6	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	X

Method of Determination: Garmin GPS map 76S, 2009 and 2011 ArcMap, and Homestead Entry Survey N. 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>
A0016940 Domestic System Grundfos SQ Flex 2					1 ¼ inch
A0016941 Irrigation System Honda ^X160		5.5	North Star Model#10625		2 inch

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

D. FLOW MEASUREMENTS

1. Measurements:

DOMESTIC: A0016940

Domestic System Theoretical:

$$(8.8 \times 2 \text{ Hp} \times 0.7 \text{ eff}) / [10 \text{ ft lift} + (20 \text{ psi} \times 2.31)] = 12.32 / 56.2 = 0.219 = 0.22 \text{ cfs}$$

Domestic Physical Measurement (measured, while both were running at the same time):

$$\text{Lot 20/21: } (5 \text{ gallons} \times 60 \text{ sec}) / 4 \text{ sec} = 75 \text{ gpm} \times 0.00223 = 0.17 \text{ cfs}$$

$$\text{Lot 16: } (5 \text{ gallons} \times 60 \text{ sec}) / 8 \text{ sec} = 37.5 \text{ gpm} \times 0.00223 = 0.08 \text{ cfs}$$

$$\text{Domestic Total} = 0.17 + 0.08 = 0.25 \text{ cfs system capacity for domestic}$$

$$\text{Exh. 12 Maximum Instantaneous Requirement (internal use only) for 3 homes L17, 19, and 22) = 0.08 cfs}$$

IRRIGATION: A0016941

Irrigation System Theoretical:

$$(8.8 \times 5.5 \text{ Hp} \times 0.7 \text{ eff}) / [10 \text{ ft lift} + (60 \text{ psi} \times 2.31)] = 33.88 / 148.6 = 0.23 \text{ cfs}$$

Irrigation Physical Measurement (U of I nozzle conversion):

2 (1/2 inch nozzles run at one time at 60 psi

$$Q = 30 \times D(\text{in})^2 \times (\text{psi})^0.5$$

$$Q = 30 \times .25 \times 7.75 = 58.09 \times 2 \text{ nozzles} = 116.2 \times 0.00223 = 0.26 \text{ cfs system capacity for irrigation}$$

3 inch pipe conversion (used for storage):

$$Q = 5 \times 3.2416 \times [(diameter/12)/2]^2 = 0.25 \text{ cfs}$$

$$\text{CFS} < \text{or} = 5 \text{ acres} @ 0.03 \text{ cfs/acre} = 0.15 \text{ cfs}$$

RECOMMEND:

Irrigation: 5 acres, 0.15 cfs

Domestic: 3-homes (L17, 19 and 22) internal use only = 0.08 cfs. (external use covered under irr. component)

Total Diversion Rate = 0.20 cfs (as permitted)

E. VOLUME CALCULATIONS**1. Irrigation:**

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 5 \times 3.0 = 15.0 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.15 \text{ cfs} \times 230 \times 1.9835 = 68.4 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 15.0 \text{ af}$$

Domestic (internal use only) L17, 19, and 22:

$$0.6 \times 3 \text{ homes} = 1.8 \text{ af}$$

RECOMMEND:

Irrigation = 15.0 af

Domestic = 1.8 af

Total Annual Volume: 16.8 af

F. NARRATIVE/REMARKS/COMMENTS

The **domestic system (A0016940)** consists of a POD, where a 15 ft hole was dug in the side of the bank of the South Fork Salmon River and then was sleeved/cased (to act as a filtration system from the raw river water, drawing water from the river through the sand; there is a Johnson screen at the intake). There is a 2 Hp submersible Grundfos SQ Flex pump, 10 ft lift, 1 1/4 inch discharge to 1 1/4 inch buried poly pipe which turns almost 90 degrees and changes to 2 inch poly running south to north along the east property line of lots 15 - 22 (all lots are stubbed in with 1 inch poly, although not all lot owners opted to tie into this system). The 2 inch poly is used to add additional storage to the system. Between Lots 19 and 20, the line Ts off and reduces to 1 1/4 inch poly that runs up the hill and discharges to a 1400 and 1700 gallon buried plastic storage tanks. Each lot has a frost free hydrant where hoses are attached with misc. size rainbird's (2 can run at the same time). The rainbird's are moved around the lots for external use (watering garden, and the area surrounding the houses, or for lots without houses, around their camp sites; also used for fire protection).

The **irrigation system (A0016941)** consists of: a screened intake from the river to a Honda 6X160 5.5 Hp North Star model 10625 (max. head 187 ft), 2 inch discharge, 10 ft lift. The 2 inch discharge can be attached to one of 4 (2 inch) risers to direct water different directions with collapsible hoses (for irrigation or in the event of fire). It can also discharge to a buried 2 inch PVC that converts to 3 inch buried PVC (for additional storage) that follows the same pattern as the domestic system running on the east boarder, running south to north on the property line of Lots 15 - 22. It splits between Lots 19 and 20 and reduces to a 2 inch PVC line to the 1400 and 1700 gallon buried plastic storage tanks.

Throughout the irrigation distribution system, there are numerous 2 inch and 3 inch risers to attach collapsible hoses to attach to 1/2 inch rainbird's which are moved around. At the time of the field inspection, 2 (1/2 inch) rainbird's were running at one time at 60 psi. **In the event of a fire emergency**, where additional flow may be needed either at Association #1 or Association #2 POU, the two systems have the capability of diverting water from the other system through an interconnecting buried 2 inch PVC line, which is **used only in the event of fire emergencies** (see 1/11/2012 email in the file from Brian Howard).

The **quarter-quarter determination** was confirmed by extending the quarter- quarter lines down, therefore the POD and Lots 15 - 22 are located in the NENE, and not the NWNE (see copy of the Homestead Entry Survey 701 in the file). When the irrigation pumps are not in use, they are locked in the shop.

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

029 Johnson screens were installed on both the domestic intake, and irrigation intake in the river.

195 The irrigation pump is locked up in the shop when it is not used for irrigation. There is always one of the residents present at the POU during irrigation operations (collapsible lines cannot be left out, due to the majority of the POU being irrigated is an airplane run-way/landing strip.

196 From the discharge to the control box is a straight length of PVC, which is easily accessible for installation of a device for measuring the entire flow of water being diverted in connection with this right.

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	0.150 CFS	15.00 AF
DOMESTIC	01/01 to 12/31	0.080 CFS	1.80 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

H. AUTHENTICATION

Field Examiner's Name Sandy Hemenway Date 2/7/2012

TO: 77-14162, 77-14221, 77-14274, and 77-14328 (Domestic System) ^{gth.}

FROM: Sandy Hemenway

DATE: January 19, 2012

RE: Definition of a Well, and Determination

**IDAHO ADMINISTRATIVE CODE IDAPA 37.03.09 Department of Water Resources Well Construction Standards
Rules Page 8 IAC 2011**

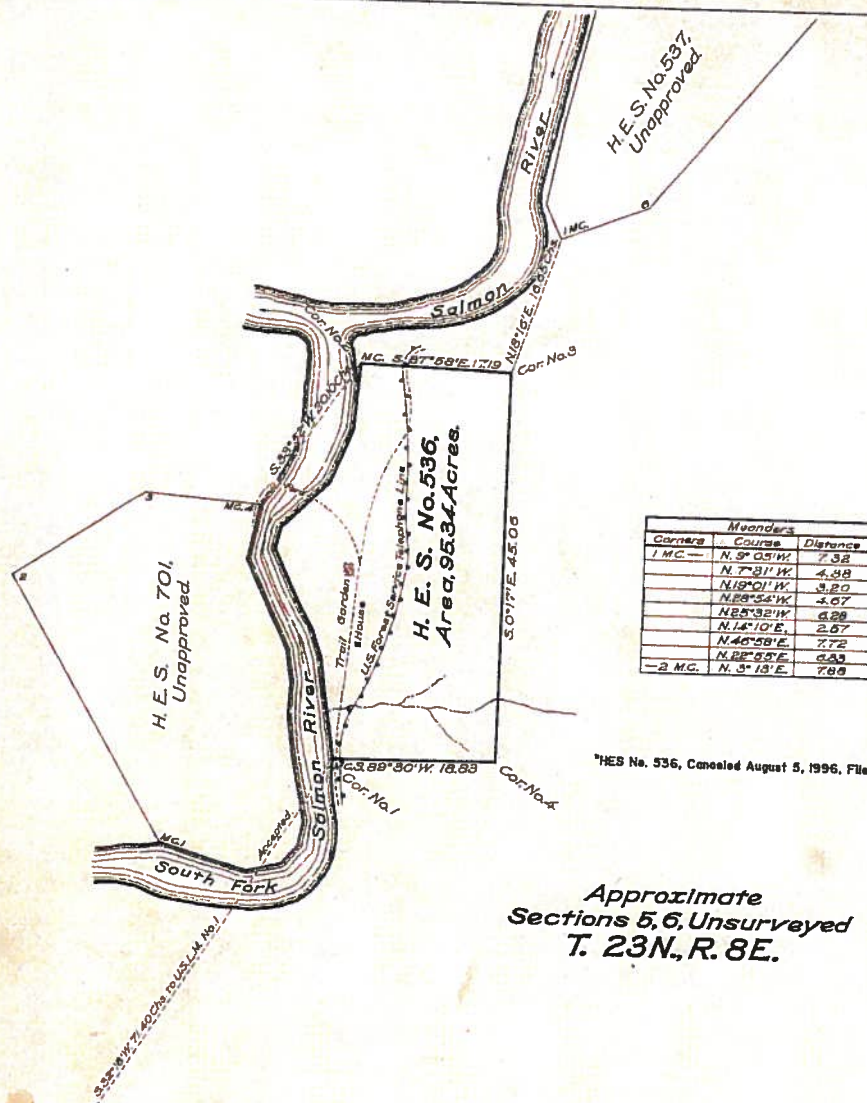
66. Well. (5-8-09) **a.** An artificial excavation or opening in the ground more than eighteen (18) feet in vertical depth below land surface by which ground water of any temperature is sought or obtained. The depth of a well is determined by measuring the maximum vertical distance between the land surface and the deepest portion of the well.

The domestic source for water rights 77-14162, 77-14221, 77-14274, and 77-14328 was confirmed during the 9/30/2011 Beneficial Use Field Examination as the South Fork Salmon River. A 15 foot vertical depth hole was dug in the bank of the South Fork Salmon River (which does not meet the >18 foot vertical depth requirement), which is sleeved/cased, and has a 2 Hp submersible pump which is used to supply the domestic potable water. The vertical sleeve/casing and the sand act as a filtration system to utilize the raw river water as a domestic potable source.

77-14328

ORIGINAL
Survey accepted May 2, 1921
General Land Office

Plat of
**HOMESTEAD
ENTRY SURVEY**
No. 536
in the
IDAHO
NATIONAL FOREST
in
Approximate
Sections 5, 6, Unsurveyed
T. 23N., R. 8E.
of the
BOISE BASE AND MERIDIAN,
IDAHO.



*HES No. 536, Cancelled August 5, 1996, File 9605, 10-957

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

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.

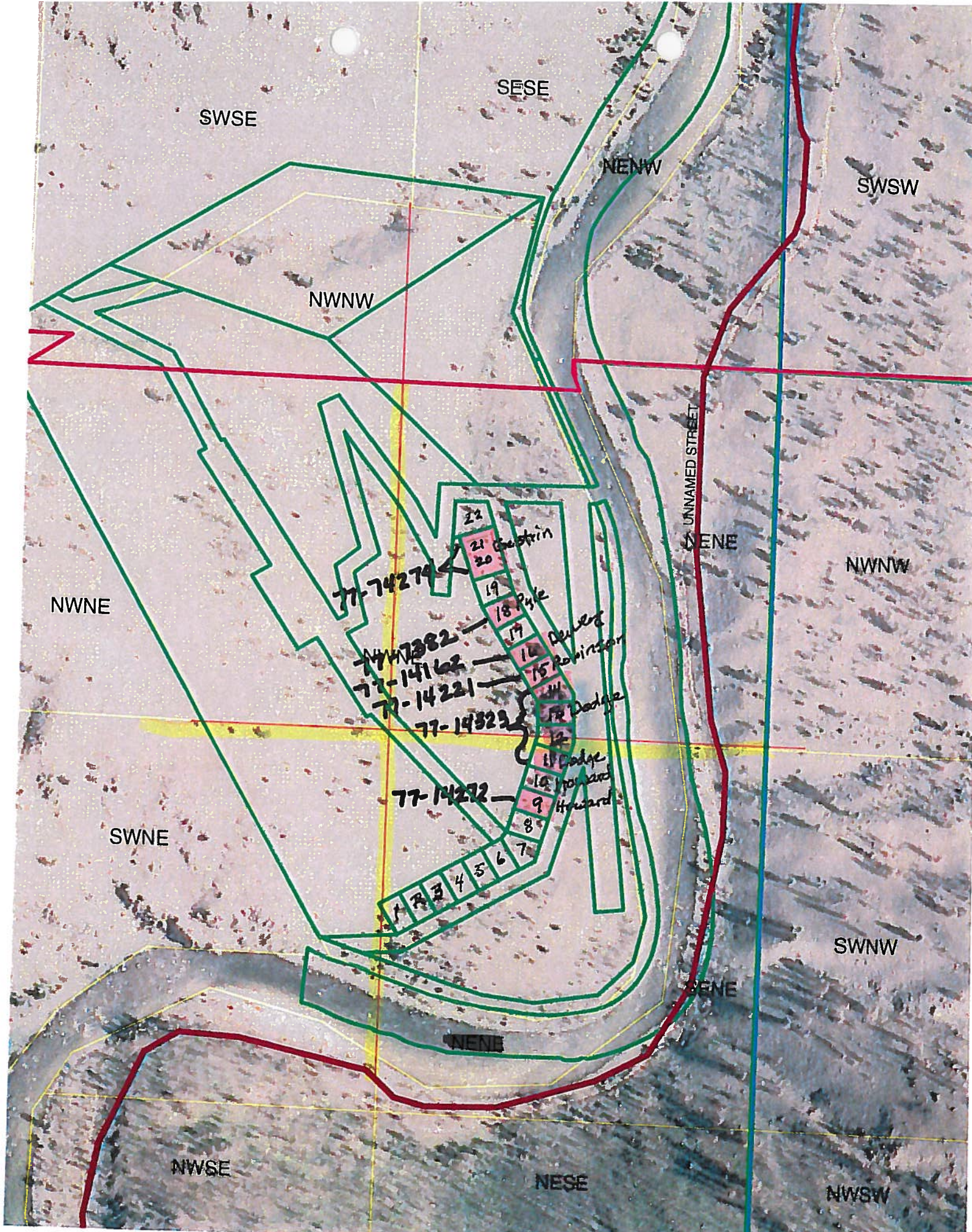
Edward Hendon
U.S. Surveyor General

SCALE: 10 chains to 1 inch

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

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

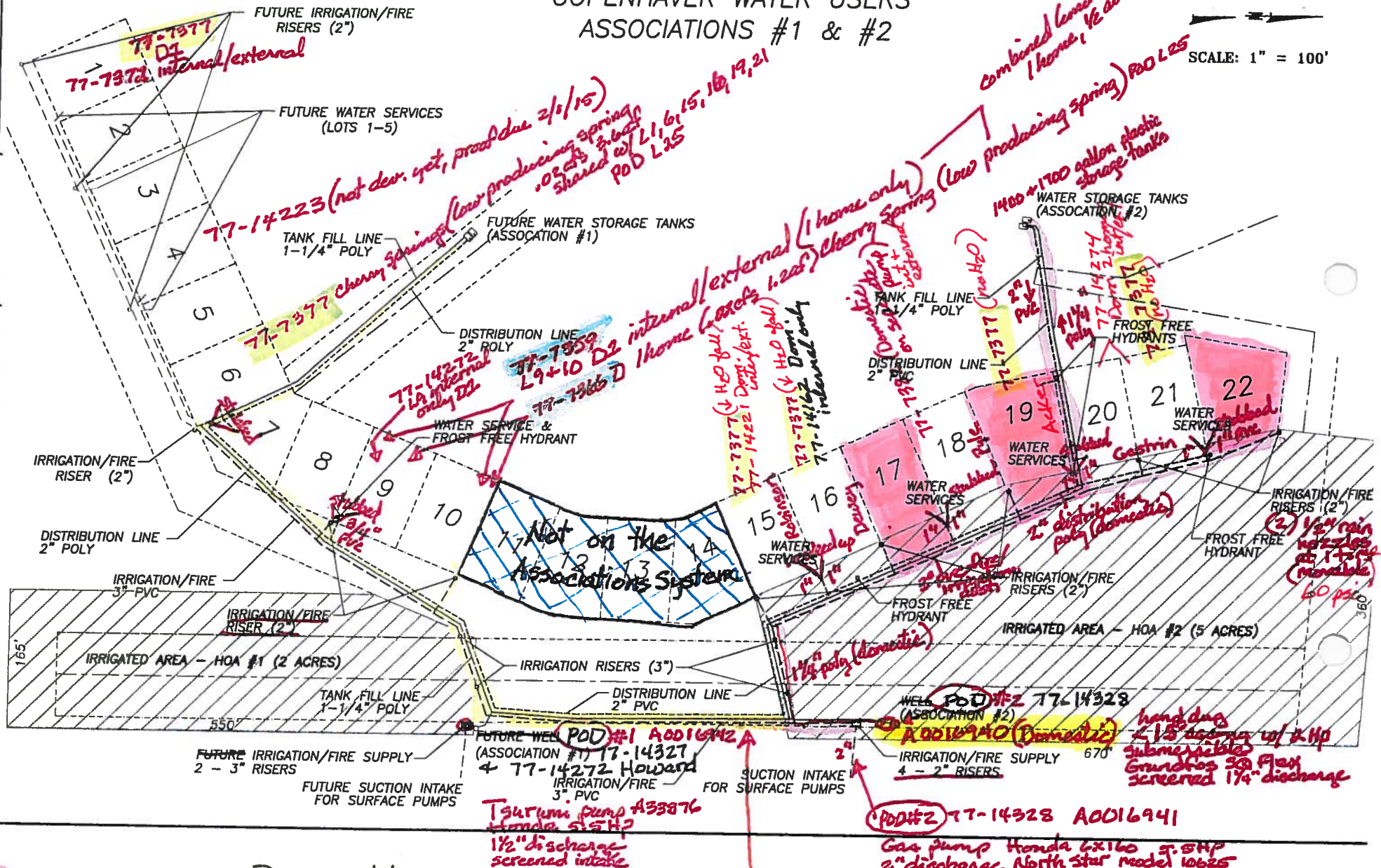
Act of June 11, 1906	Act of May 30, 1920
List No. 4-373	Dated May 11, 1910
List No. 4-1735	Dated May 1, 1915
Latitude 45° 21' 45" N.	Observations
Longitude 115° 30' 07" W.	Near House
Magn. Mag. Decl. 20° 40' E.	



77-14328 Copenhaver #2 Quarter Quarter S. Hornum...

COPENHAVER WATER USERS
ASSOCIATIONS #1 & #2

SCALE: 1" = 100'

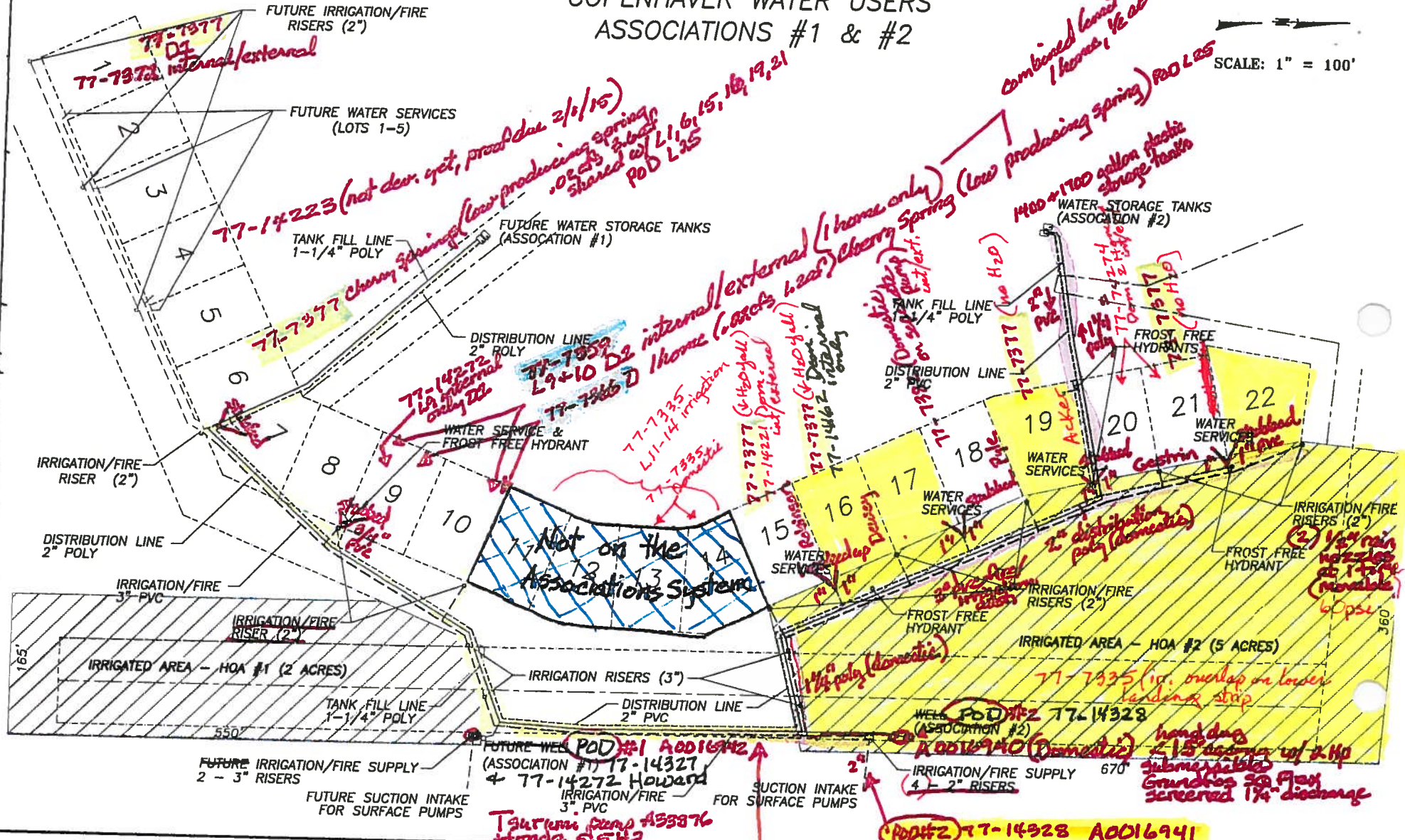


77-14328 Domestic
Internal use only
A0016940

This line is only to interconnect the systems for fire suppression emergencies (see 1/11/2012 email)

COPENHAVER WATER USERS ASSOCIATIONS #1 & #2

SCALE: 1" = 100'



= 77-14328 Irrigation
 A0016941

This line is only to interconnect the systems for fire suppression emergencies (see 1/14/2012 email)



POD
Domestic
System
15' hand
dug hole
(sleeved/
cased)
near
the
bank
of the
river,
with a
2 Hp
Submersal
Grundfos
SQ Flex
pump,
with a
Johnso
screen
at the
intake
1 1/4" dischar



Buried
1400
+ 1700
gallon
plastic
storage
tanks
located
on the
hill
west of
L19 +
L20
property
line



Screen intake

POD
Irrigation
system

(4) 2"
risers
to
attach
hoses
to, &
move
them
around



Gas
Pump,
Honda
6X160
5.5 Hp
2" discharge
North
Star
model
10625
max.
head
187',
10' lift

(4) 2"
risers to
attach.
collapsed
line
across
landing
strip &
buried
pipe.



POU

L16
grass
& trees
around
house

landir
strip

09/30/2011



controls

09/30/2011



77-14328 Copenhagen Water Users Assoc. #2

S. Hemerick