

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 97-7514
Exam Date: 03/24/2021

1. Current Owner:
WEST BONNER WATER & SEWER DISTRICT 215 N WASHINGTON AVE OLDTOWN ID 83822
2. Accompanied by: Kevin Wylie
Phone No: 208-818-8417
Address: Same as above
Relationship to permit Holder: Public Works Supervisor

3. **SOURCE:**
GROUND WATER

Method of Determination: Arcmap and DRG.

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
96-2002	SPRING	DOMESTIC, FIRE PROTECTION	LICENSE
96-2015	SPRING	DOMESTIC, FIRE PROTECTION	LICENSE
96-2103	SPRING	DOMESTIC	LICENSE

Comments: Rights 96-2002, 96-2015, and 96-2103 all have spring sources for domestic and/or fire protection uses, currently owned by West Bonner Water & Sewer District (Applicant). These three licenses are old rights that incorporated both the city of Oldtown, ID and Newport, WA at the time they were licensed and overlap this right's service area POU. There is not a lot of information in the backfile, including a lack of POU shapes identified using Arcmap imagery. The diversion rates for each respective right is not additive to the diversion rate for right 97-7514. Once the historic use of each respective right is validated during the upcoming adjudication of basin 97, it is recommended that the finalized claim recommendation be considered for combined use with this right using condition X35; X35 was is not recommended for inclusion in licensing permit 97-7514.

2. Other water rights with the same point-of-diversion: NO Overlap

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER L4 (SE¼ SE¼), Sec. 24, Twp 56N, Rge 06W, B.M. BONNER County
GROUND WATER L4 (SE¼ SE¼), Sec. 24, Twp 56N, Rge 06W, B.M. BONNER County

Method of Determination: GPS. PODs are two wells located at -117° 1.5183, 48° 10.9161 (D0061361, west well) and -117° 1.4960, 48° 10.9170 (D0061362, east well)

Method of Determination: Large POU shape developed following field exam using Arcmap aerial imagery.

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
D0061361		60			
D0061362		60			

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
FLOWMETER(S) 2EA		SIEMENS	SITRANS F M MAG 5100 W	7ME65 389201U263		

2. Measurements: Each well has a Siemens flowmeter installed on the main line prior to the two wells being joined to a common main trunk line. Each well was operated independently, with flowmeter screens and system SCADA panel displaying 206 gpm on each well. The total flow measurement equals 206 gpm (D0061361) + 206 gpm (D0061362) = 412 gpm, or **0.92 cfs** considering department rounding standards.

E. FLOW CALCULATIONS

Measured Method: Flowmeter readings = 206 gpm (D0061361) + 206 gpm (D0061362) = 412 gpm, or **0.92 cfs** considering department rounding standards.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A

2. Volume Calculations for Other Uses: the municipal use serves the municipality of Oldtown, ID; there are no volume metrics associated with this direct flow water right.

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 3/24/2021 with the City of Oldtown's (City) Public Works Supervisor, Kevin Wylie, showed two groundwater wells servicing the City's municipal water system. The permit was approved for 3ea PODs, but existing well permit No. 874744 had been abandoned by 3/20/2015. This permit has developed 2ea groundwater PODs, D0061361 & D0061362, located north of the Pend Oreille River. The well field and pump station are situated with D0061361 (west well) located to the west of the pump station, and D0061362 (east well) located to the east of the pump station. The City's groundwater municipal system incorporates a SCADA monitoring system, and 2ea Siemens flowmeters installed on each well's main pipeline located in the pump station. During the exam, each well was operated independently, with flowmeter screens and system SCADA panel displaying 206 gpm on each well. The total flow measurement equals 206 gpm (D0061361) + 206 gpm (D0061362) = 412 gpm, or **0.92 cfs** considering department rounding standards which is recommended for licensing purposes.

Each well has a 60 HP pump installed according to Mr. Wylie. Theoretic pump equations identify that each 60 HP well has the pumping capacity to divert larger flows than the combined flow rate observed, but each pump is a multiple phase pump that has likely been restricted for current City diversion needs. Having installed the larger capacity pumps now will enable the City to increase flow rates without replacing pump components in the future, with new applications required at that time, as the City's growth necessitates larger instantaneous flow. The maximum diversion rate for licensing purposes is limited by pumping performance observed during the field exam, and recommended for 0.92 cfs.

During the exam, The City's municipal POU was reviewed looking through Overall Layout – Water System recorded engineer drawings. The water system service lines route from the pump station North of the highway to a 1 million gallon storage reservoir positioned on a hill slope overlooking the valley floor. This elevation provides gravity flow making the system operate more efficiently. The water system is a closed loop system that has a main line routing under the river, up-channel from the bridge, joining the City's spring source water main lines and 500,000 gallon storage reservoir. Both storage reservoirs were constructed at relatively equal elevations, to allow gravity flow between each system conjointly with a main bore line joining the two sources.

Prior to the development of this permit, the City's municipal water system provided services for the City of Newport, Washington. During the development period, the two main service lines that crossed the highway from Oldtown to Newport were disabled, with valves removed or blocked terminating service connections to the City of Newport. Each of these terminated lines were observed during the field exam. The primary function of this permit as described by Mr. Wylie is to provide water for the majority of growth occurring on the North and East side of the Pend Oreille River. As this the City is a municipality water supplier, there is no volume metric applied during the licensing of this direct flow permit.

Conditions 029, 046, and 134 were removed from the permit during licensing review. Condition 126 was updated to include the DEQ Public Water System (PWS) No. 1090151. All other conditions on the permit will be carried forward to licensing. Overlap concerns: Rights 96-2002, 96-2015, and 96-2103 all incorporate spring sources for domestic and/or fire protection uses, currently owned by West Bonner Water & Sewer District (Applicant). These three licenses are old rights that included both the city of Oldtown, ID and Newport, WA at the time they were licensed and overlap this right's service area POU. There is not a lot of information in the backfile, and a lack of POU shapes identified using Arcmap imagery. The diversion rates for each respective right is not additive to the diversion rate for right 97-7514. Once the historic use of each respective right is validated during the upcoming adjudication of basin 97, it is recommended that the finalized claim recommendation be considered for combined use with this right using condition X35; X35 was is not recommended for inclusion in licensing permit 97-7514. There are no further overlap concerns for this right.

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

H. RECOMMENDATIONS

1. Recommended Amounts

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>
MUNICIPAL	01/01 to 12/31	0.92 CFS

Totals: 0.92 CFS

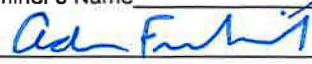
2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

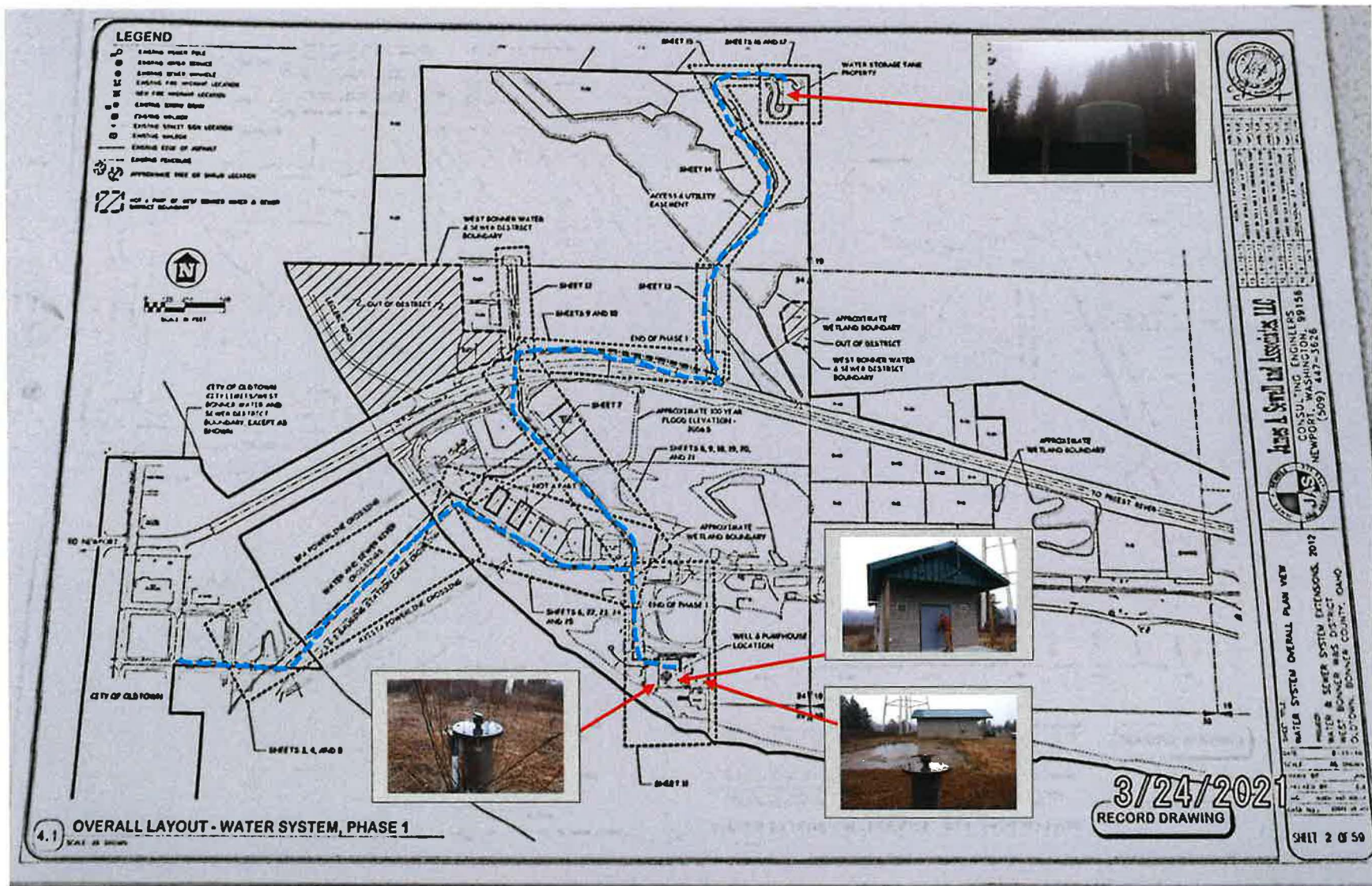
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☒ None

I. AUTHENTICATION Luke Bates - Water Resource Agent

Field Examiner's Name  Date 5/28/2021

Reviewer  Date 8/13/2021

97-7514 – WATER SYSTEM DIAGRAM – ATTACHMENT TO FIELD EXAM



Bates, Luke

From: Kevin Wylie <kwylie21@hotmail.com>
Sent: Monday, April 5, 2021 9:01 AM
To: Bates, Luke
Subject: Re: Pump HP

Good morning Luke, I apologize for the delay. According to the as built it say the pumps are 60HP.

Sent from my Verizon, Samsung Galaxy smartphone
Get [Outlook for Android](#)

From: Bates, Luke <Luke.Bates@idwr.idaho.gov>
Sent: Tuesday, March 30, 2021 12:05:11 PM
To: Kevin Wylie <kwylie21@hotmail.com>
Subject: RE: Pump HP

Good afternoon Mr. Wylie,

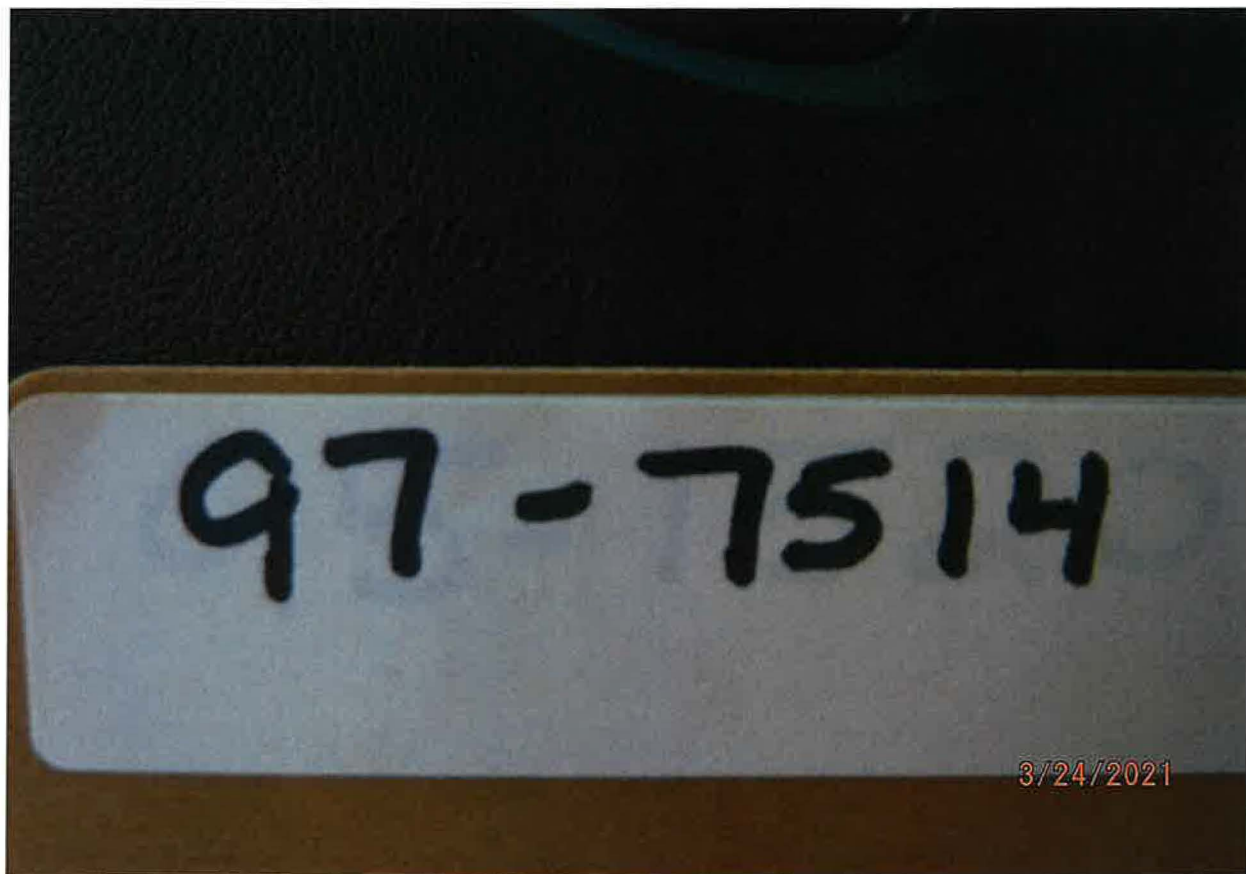
I wanted to follow up on the 2 wells pump horse power data; looking at the well logs and corresponding flow rates, it is likely they are 20 hp pumps, but I need to verify that.

Thank you for considering this request,
Luke Bates
Water Resource Agent - IDWR
P: (208) 762-2800
Luke.bates@idwr.idaho.gov

From: Kevin Wylie [mailto:kwylie21@hotmail.com]
Sent: Wednesday, March 24, 2021 4:54 PM
To: Bates, Luke <Luke.Bates@idwr.idaho.gov>
Subject: Pump HP

Luke, I will send this information over in the morning. I am gone for the day.
Thanks!

Sent from my Verizon, Samsung Galaxy smartphone
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FIELD EXAM DATE – 3/24/2021



DIVERSION WORKS PUMP HOUSE



POD – WEST WELL; D-TAG D0061361





POD – EAST WELL; D-TAG D0061362





WATER CONVEYANCE SYSTEM – WATER MAIN FROM WEST WELL



WATER CONVEYANCE SYSTEM – WATER MAIN FROM EAST WELL

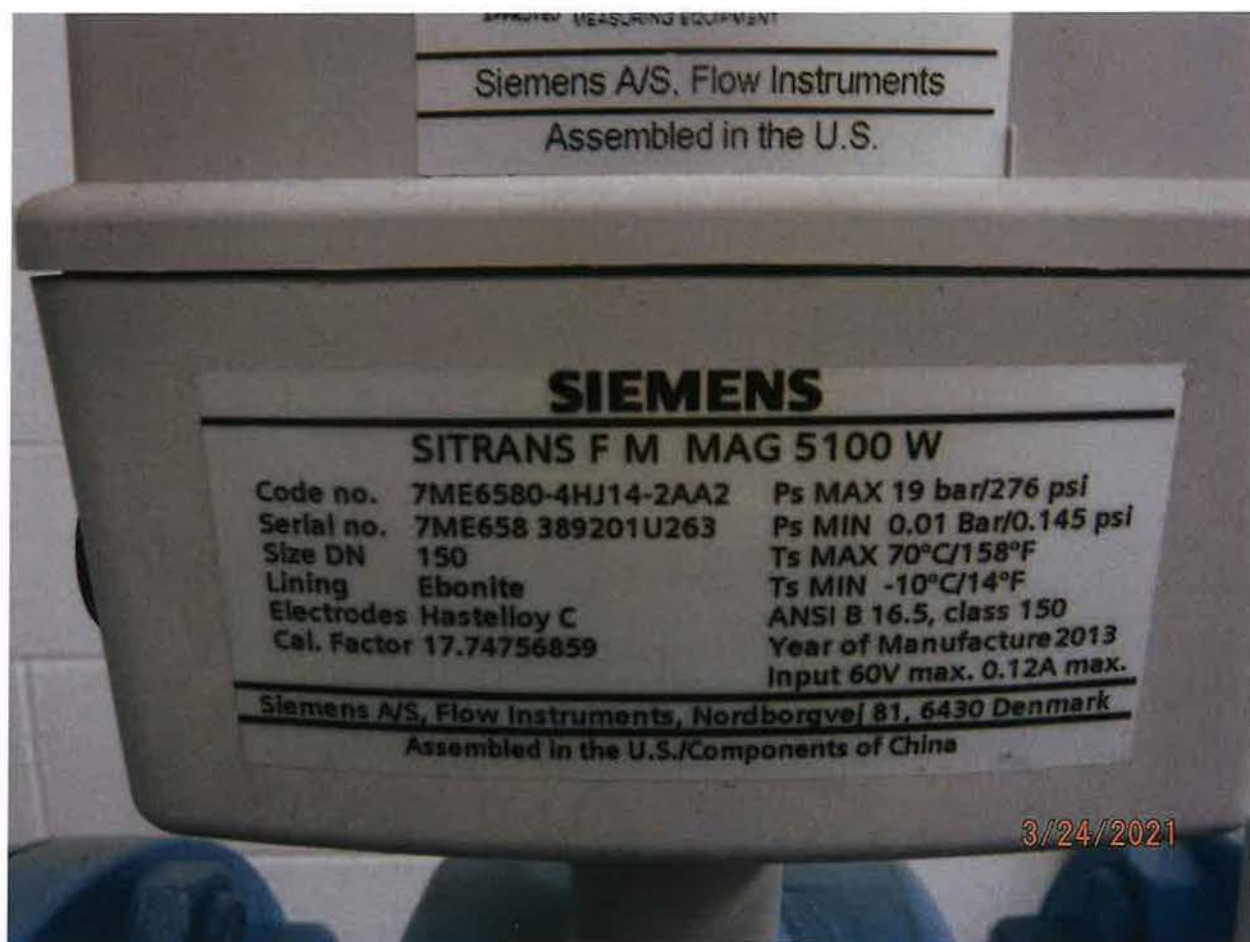


WATER SYSTEM SCADA CONTROL PANEL



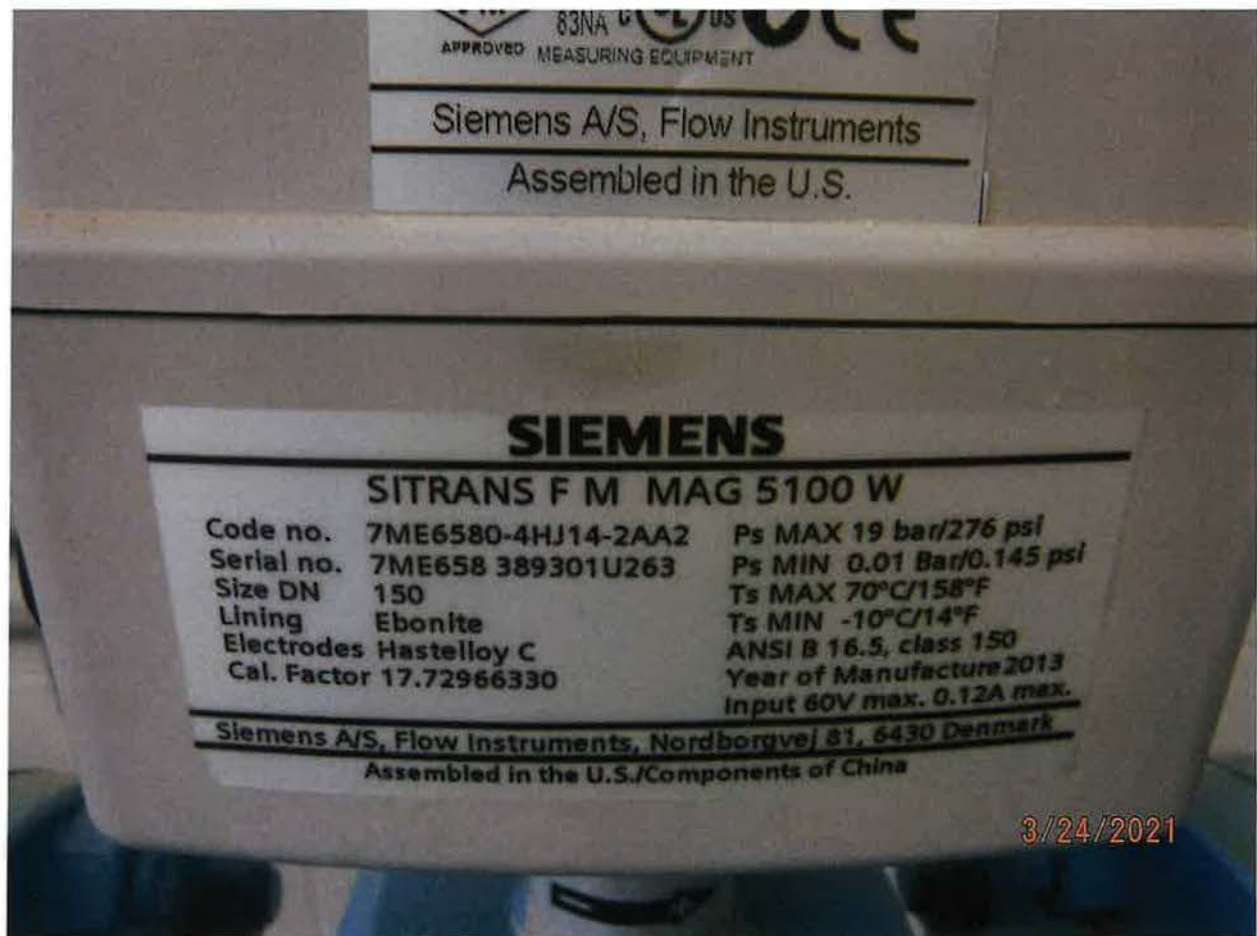


WEST WELL – FLOWMETER MEASUREMENT 206 GPM





EAST WELL – FLOWMETER MEASUREMENT 206 GPM





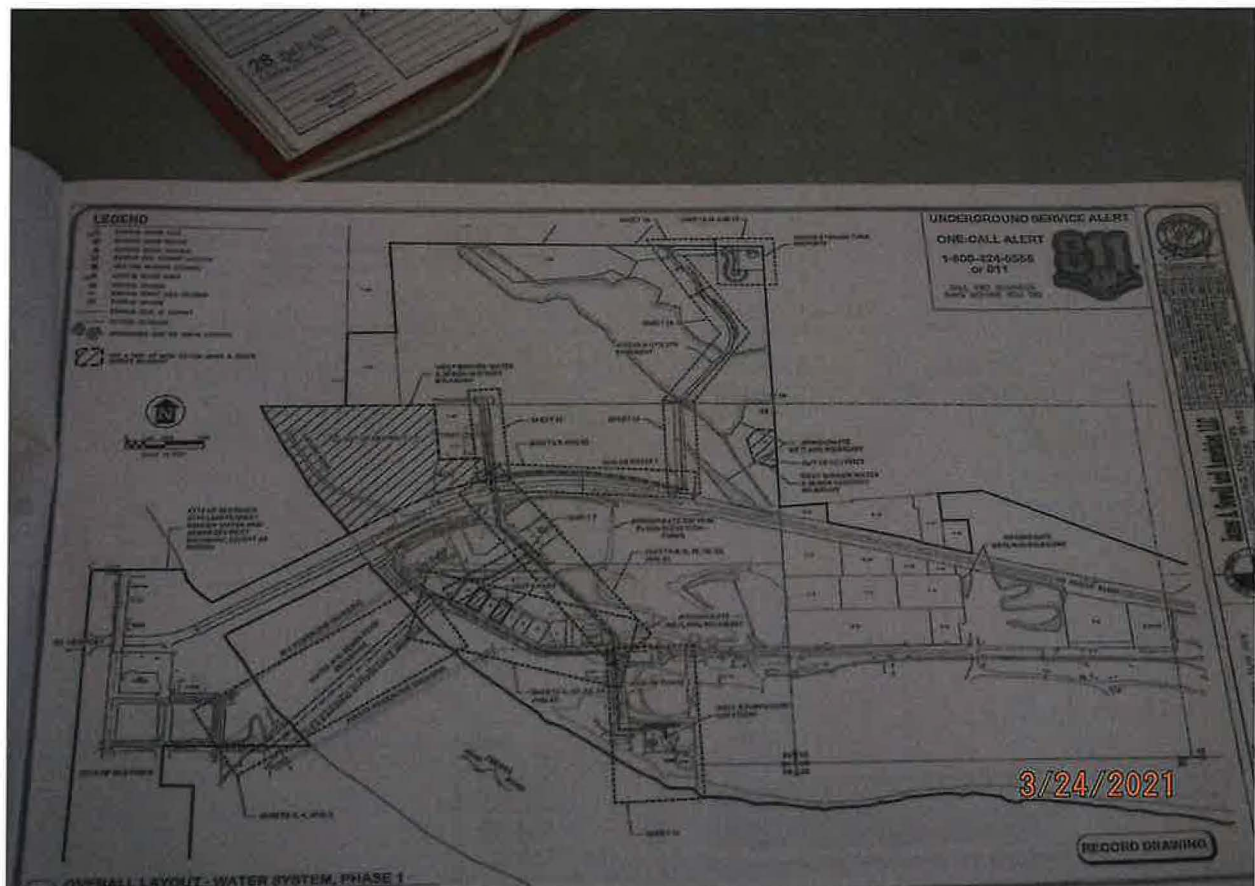
1 MILLION GALLON STORAGE TANK ASSOCIATED WITH 2 WELLS WATER CONVEYANCE SYSTEM



1 OF 2 EA MAIN LINE VALVES DISCONNECTED – TERMINATES WATER SERVICE TO NEWPORT, WA



2 OF 2 EA MAIN LINE VALVES (LOCATION) DISCONNECTED – TERMINATES WATER SERVICE TO NEWPORT, WA



WATER LINE SCHEMATIC – ILLUSTRATES WATER RIVER CROSSING, WELL & PUMP HOUSE LOCATION, AND WATER STORAGE TANK