STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-9750
Exam Date: 08/27/2020

1. Current Owner:
   LORI MOORE 1884 FLUME CREEK RD SANDPOINT ID 83864-4786 AND/OR
   GRAFF MOORE 1884 FLUME CREEK RD SANDPOINT ID 83864-4786

2. Accompanied by: Graff Moore
   Phone No: 208-263-6502
   Address: Same as above
   Relationship to permit Holder: Permit Holder

3. **SOURCE:** FLUME CREEK

Tributary RAPID LIGHTNING CREEK

Method of Determination: Arcmap and DRG.

B. OVERLAP REVIEW

1. Other water rights with the same place of use: NO Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: _____

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

Water Right No.	Source	Purpose of Use	Basis

Comments: _____

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**
FLUME CREEK NW¼ SW¼, Sec. 13, Twp 58N, Rge 01E, B.M. BONNER County

Method of Determination: GPS. POD pipe in creek to submersible pump in cistern located at -116°16.915, 48°22.698.

PLACE OF USE: IRRIGATION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
58N	01E	13										2.0							2.0

Total Acres: 2.0

PLACE OF USE: DOMESTIC and STOCKWATER

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
58N	01E	13										X							

Method of Determination: Field exam and Arcmap.

3.

Delivery System Diagram Attached (required). Indicate all major components and distances between components.
__X__ 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
__X__ 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
NONE					

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
5 GAL BUCKET MEASUREMENT						

2. Measurements: Three 5 gallon bucket tests were completed at the first frost free hydrant inline from POD on main water line prior to pressure tank, with average of three resulting in diversion flow rate of 5 gal / 13.59 sec x 60 sec/min = 22.08 gpm = 0.05 cfs.

E. FLOW CALCULATIONS

Measured Method: 5 GAL Bucket Test = (5 gal / 13.72 sec) x 60 sec/min = 16.28 gpm
= (5 gal / 13.47 sec) x 60 sec/min = 13.47 gpm
= (5 gal / 18.08 sec) x 60 sec/min = 13.58 gpm
Average of 3ea 5 GAL Bucket Tests = (13.72 gpm + 13.47 gpm + 13.58 gpm) / 3 = 22.08 gpm = **0.05 cfs**

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$V_{I.R}$ = (Acres Irrigated) x (Irrigation Requirement) = 2 acres x 3.0 afa = 6.0 af

$V_{D.R}$ = [Diversion Rate (cfs)] x (Days in Irrigation season) x 1.9835 = 0.05 cfs x 214 days x 1.9835 = 21 af

V = Smaller of $V_{I.R}$ and $V_{D.R}$ = 6.0 af

2. Volume Calculations for Other Uses:

This is a surface water right; there will be no annual volume applied to the irrigation component, nor a maximum diversion volumes applied to this water right.

Domestic component annual volume = **0.6 af**

Stockwater component annual volume = 5 horses x 12 gpd x 365 days = 21,900 gal & 50 chickens x 0.1 gpd x 365 = 365 gal

- Combined total Stockwater Annual Volume = 21,900 gal (horses) + 365 gal (chickens) = 22,265 gal / 325,850 gal per af = 0.07 af which defaults to **0.1 af** considering this is the minimum volume the Department can apply to volume computations.

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 8/27/2020 with applicant, Graff Moore, showed water being diverted from Flume Creek for domestic, irrigation, and stockwater purposes. At the POD, applicant had a 4 inch perforated pipe with mesh screen in creek where water diverted into a concrete cistern alongside the creek. The cistern was small, and qualifies as a 24hr impoundment basin. A 1.5 hp submersible pump located in the cistern diverted water, and applicant had a 750 foot 2 inch PVC pipe that routed water from POD to his home and pressure tank for domestic use. The applicant had installed 4 different frost free hydrants in line on the main 2 inch PVC water line prior to the home connection. Three 5 gallon bucket tests were completed at the first frost free hydrant inline from POD on main water line prior to pressure tank, with average of three resulting in diversion flow rate of 5 gal / 13.59 sec x 60 sec/min = 22.08 gpm = **0.05 cfs**, which will be applied to the license as the maximum diversion rate.

Applicant was permitted for an irrigation component diversion rate of 0.09 cfs, but at time of field exam two acres of irrigation were found to be put to beneficial use, which equates to a diversion rate of 0.06 cfs; the applicant is limited to an irrigation diversion rate of **0.05 cfs**, as the system's pump performance limits the rate of diversion. Applicant was permitted for **0.02 cfs** for stockwater use, which will be carried forward to the license. The applicant permitted for **0.04 cfs** for domestic use, which will be carried forward to the license. The three each beneficial use components rates of diversion are not additive beyond 0.05 cfs, as the applicant's pump is the limiting factor for determining the maximum diversion rate.

During field exam, one two story log home with daylight basement was observed at the domestic POU, validating the domestic component for licensing purposes. The annual volume applied to the domestic component equals **0.6 af**, as irrigation occurring is assigned to the irrigation component of permit. Applicant stated that he and his wife split their time between this property and Mexico, where they reside in the fall and winter months. As such, the stock had been moved off to boarders for the season in preparation for the applicant's departure for the season.

Applicant permitted for 10 head of mixed stock. A time of permit, the stock had been relocated to boarders, but evidence of stock was present throughout the stockwater POU. Applicants had a nice chicken coup and outdoor run for 50 chickens, stock pens for 5 horses, and two pastures with fenced in hotwire for horses. Horse trails, and manure was present. Applicant uses portable stock tanks which he filled from frost free hydrants in each field to water stock. The stockwater component annual volume equals 21,900 gal (horses) + 365 gal (chickens) = 22,265 gal / 325,850 gal per af = 0.07 af which defaults to **0.1 af** considering this is the minimum volume the Department can apply to volume computations. 0.1 af will be carried forward to license for the annual volume.

Applicant permitted for 3 acres of irrigation. During field exam the irrigated acreage was sketched out on a field map. Applicant watered around the house and gardens using a pressurized system with 11 zones, running 6-8 sprinklers per zone and a drip line for raised flowerbeds. Applicant used rainbird tripod sprinklers from frost free and hoses to irrigate pastures to help grass grow for stock feed throughout the season. At time of field exam, with stock being moved to boarding for the remainder of season, applicant has winterized the pasture land irrigating equipment, but frost free hydrants in the pastures were operational. The annual volume for the irrigation component equals 2.0 acres x 3.0 afa = 6.0 af, but as this is a surface water source, no volume will be applied to the irrigation annual volume; additionally, there will be no maximum diversion volume applied to this surface water right.

The stockwater condition was removed from permit during licensing review. All other conditions on permit will remain on license. There are no overlap concerns for this water right.

Have conditions of permit approval been met? _X_ Yes ____ No

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use	Rate of Diversion	Annual Volume
IRRIGATION	04/15 to 10/31	0.05 CFS	
STOCKWATER	01/01 to 12/31	0.02 CFS	0.1 AF
DOMESTIC	01/01 to 12/31	0.04 CFS	0.6 AF

Totals: 0.05 CFS

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

Luke Bates - Water Resource Agent

Field Examiner's Name L.A.B.te Date 8/28/2020

Reviewer Adam Fruhwirth Date 8/31/2020

State of Idaho
Department of Water Resources

Attachment to Field Exam

96-9750

DOMESTIC system diagram.

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

0 0.035 0.07 0.14 Miles

N

State of Idaho
Department of Water Resources

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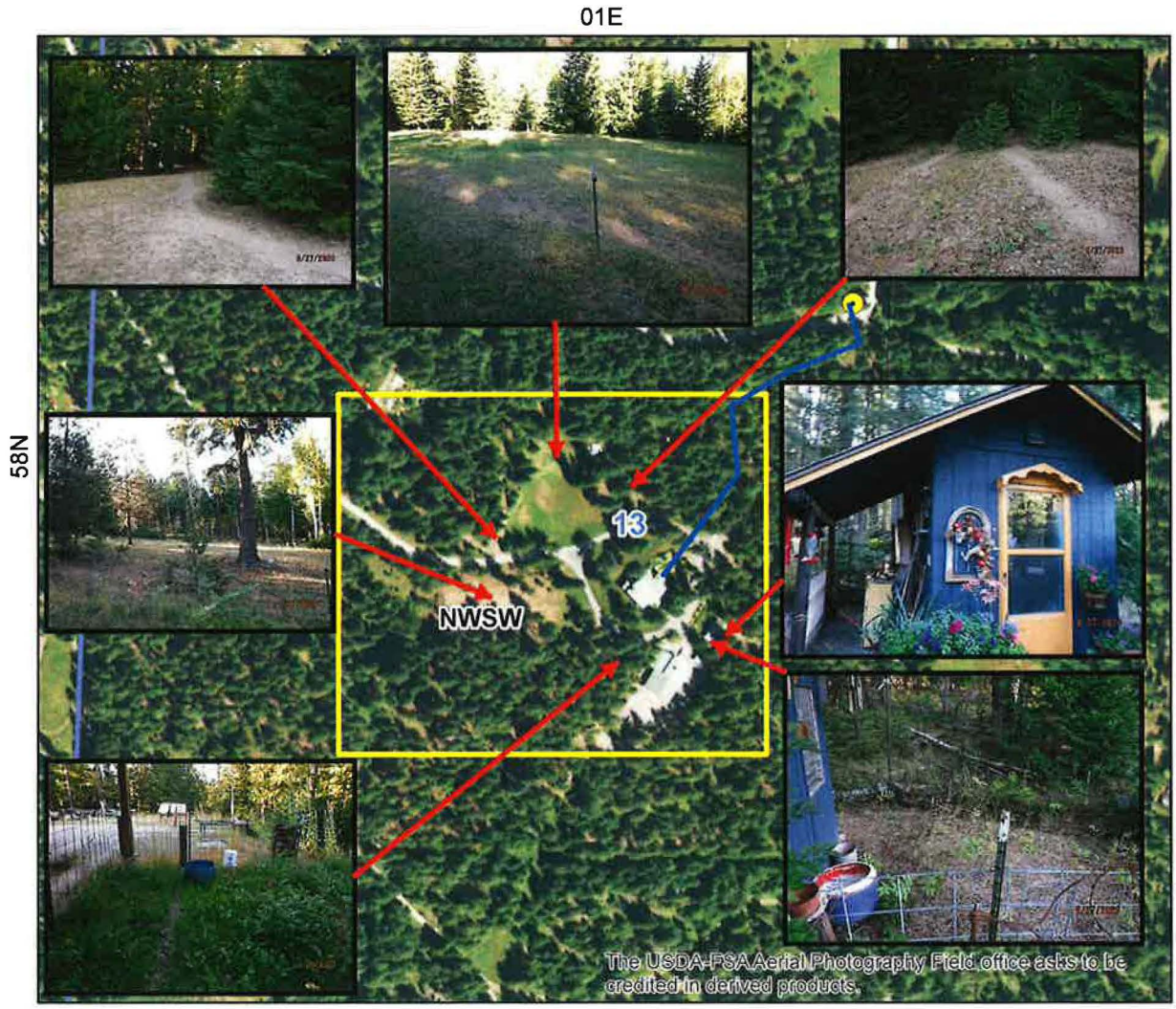
STOCKWATER system diagram.



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

0 0.035 0.07 0.14 Miles

N

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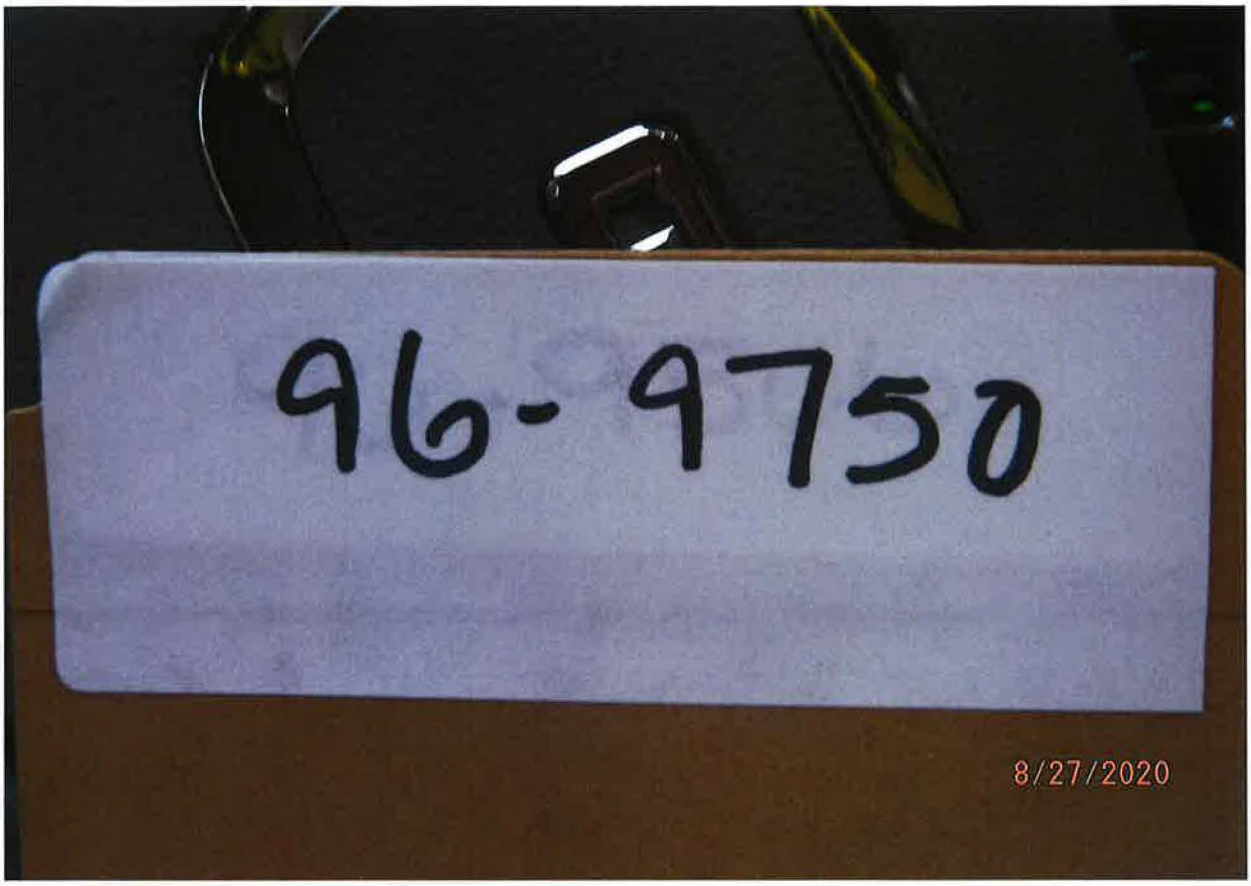
IRRIGATION system diagram.

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

0 0.035 0.07 0.14 Miles

N

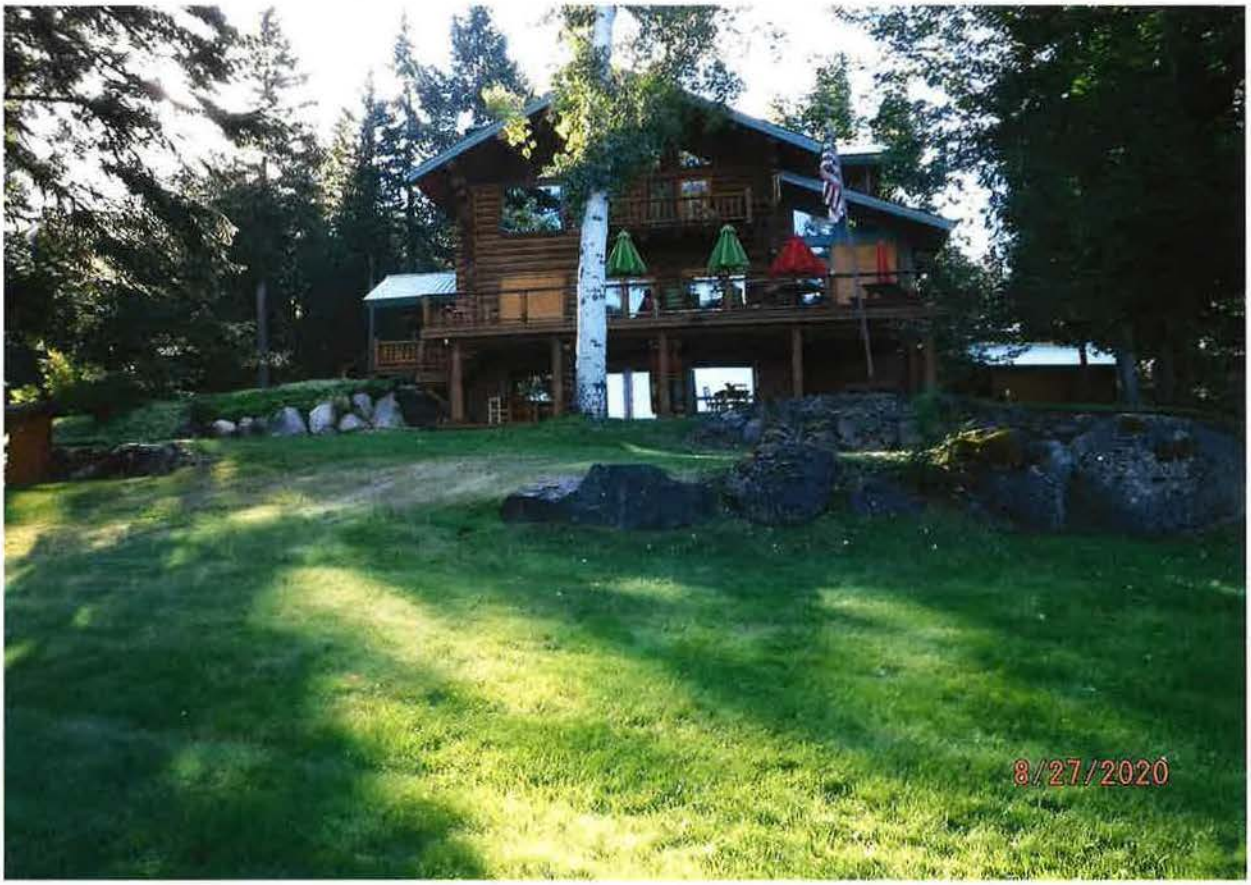


POD – PIPE WITH MESH SCREEN IN FLUME CREEK

SUBMERSIBLE PUMP IN 24HR ALLOWANCE CONCRETE CISTERN

1.5 HP SUBMERSIBLE PUMP

FROST FREE WITH DIRECT FLOW FROM MAIN LINE



DOMESTIC AND IRRIGATION POU

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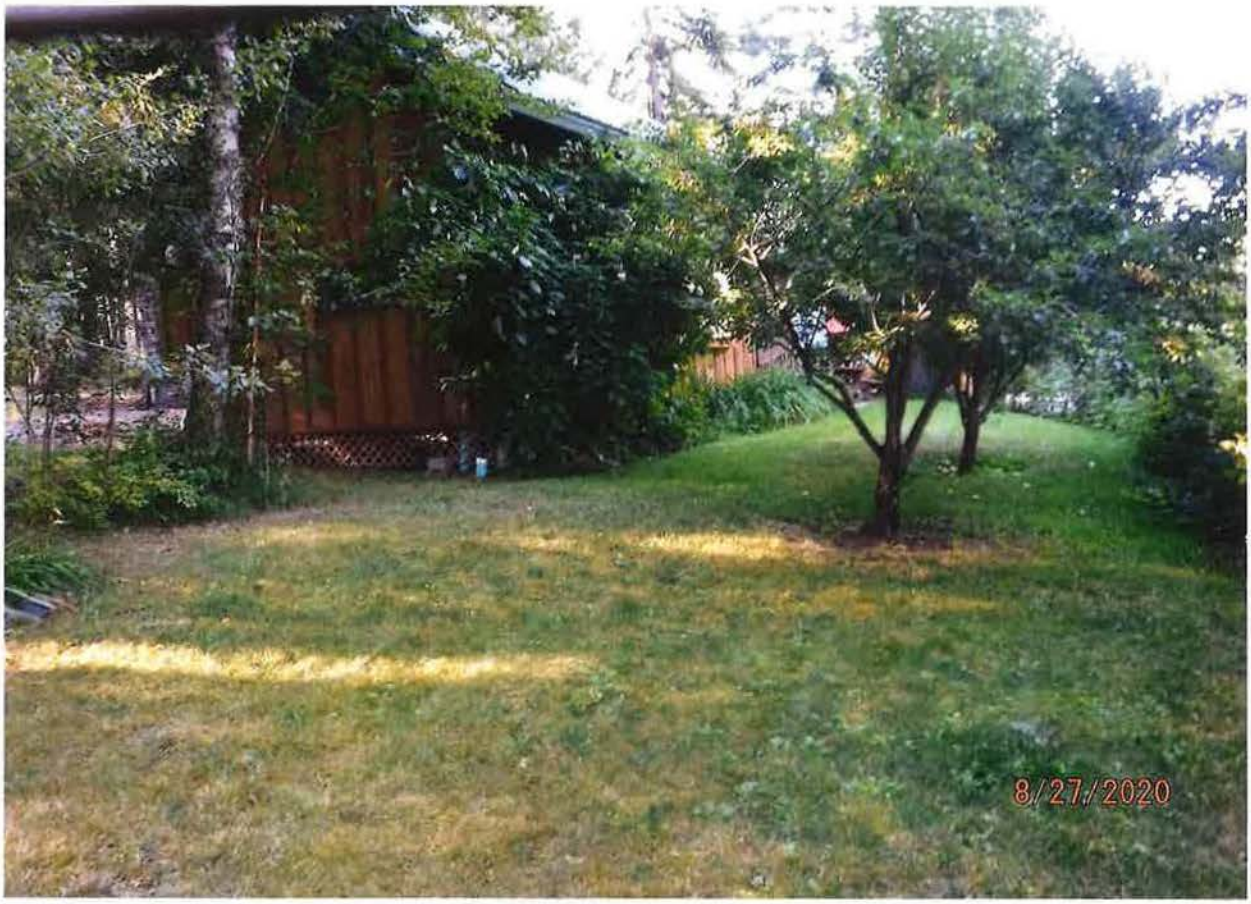
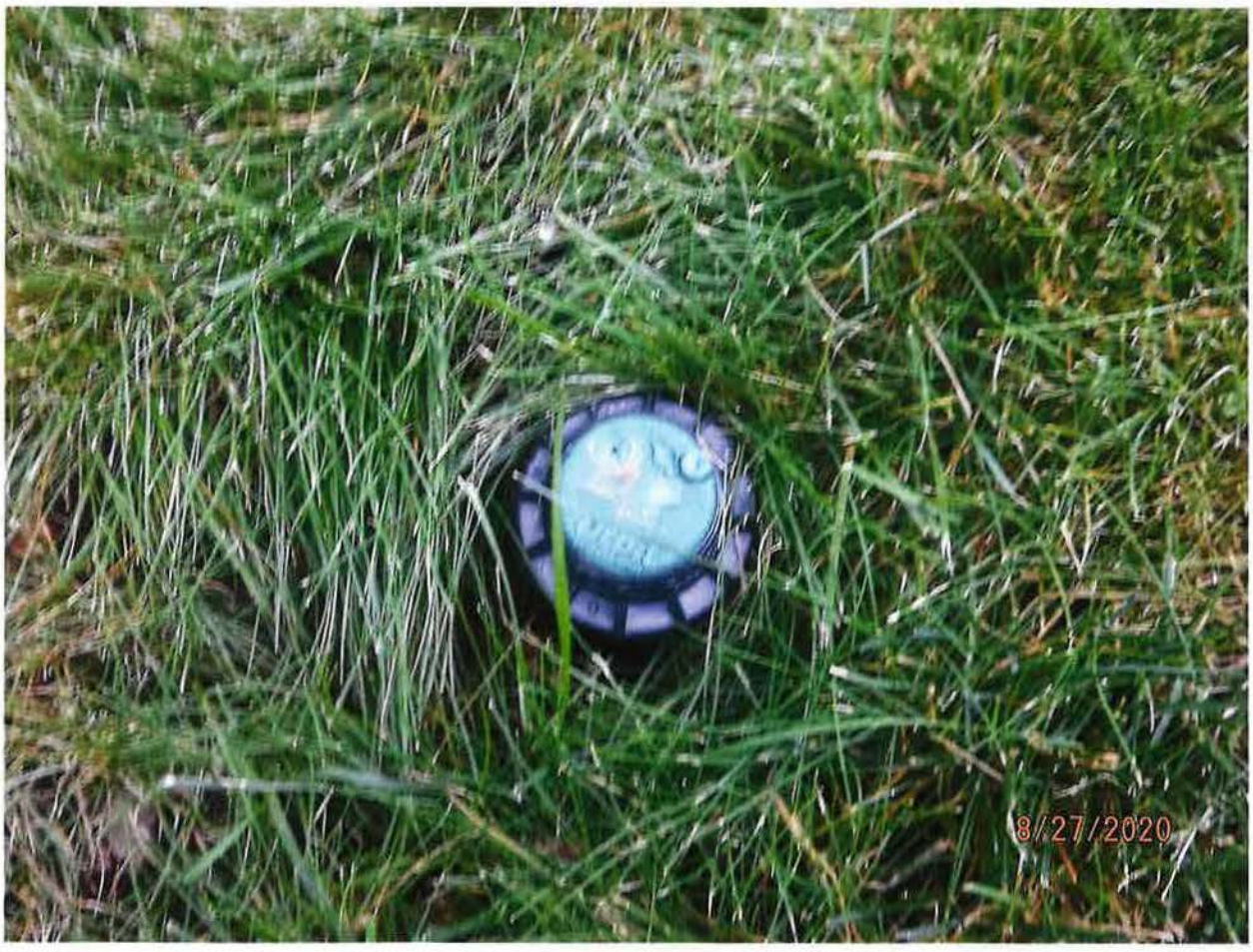


IRRIGATION POU



IRRIGATION POU

CHICKEN COUP STOCKWATER POU

STOCKWATER POU

IRRIGATION AND STOCKWATER POU

IRRIGATION AND STOCKWATER POU

IRRIGATION AND STOCKWATER POU