

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-17185
Exam Date: 09/18/2020

1. Current Owner:
LUTHERHAVEN MINISTRIES 3258 W LUTHERHAVEN RD COEUR D ALENE ID 83814-1327
2. Accompanied by: Steve Meyer
Phone No: 208-667-3459
Address: Same as above
Relationship to permit Holder: Representative

3. **SOURCE:**
GROUND WATER

Tributary
COEUR D ALENE LAKE

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
95-11027	GROUND WATER	MUNICIPAL	DECREEED
95-11028	GROUNDWATER	DOMESTIC	DECREEED

Comments: Decreed right 95-11027 uses groundwater from a separate well POD for municipal purposes that overlap this permit's POU. The annual volume associated with this permit uses the same water system as 95-11027 toward the same municipal water use; condition X35 was added in order to mitigate overlap concerns between rights 95-11027 and 95-17185.

Decreed right 95-11028 uses groundwater from a separate well POD for domestic purposes that overlap this permit's POD. The water usage covered under 95-11028 is a separate water system that services the Director's home for Lutherhaven Ministries, located in the northern portion of the applicant's property. As the systems are separate, there is no concern for overlap between 95-11028's domestic use and the municipal use associated with permit 95-17185; no overlap condition is recommended between rights 95-11028 and 95-17185.

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 SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER L5 (NW¼ SW¼), Sec. 11, Twp 49N, Rge 04W, B.M. KOOTENAI County

Method of Determination: GPS; POD is groundwater well D0072367 located at: -116°49.656, 47°36.276

Method of Determination: permit 95-17185 was processed using a large POU shape. Field exam and Arcmap aerial imagery were used to validate the municipal uses and POU boundaries.

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.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
D0072367		5			

D. FLOW MEASUREMENTS

1.

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

2. Measurements: Three 5 gallon bucket tests were completed from a frost free hydrant co-located with well, with average of three resulting in diversion flow rate of 5 gal / 9.7 sec x 60 sec/min = 30.9 gpm = **0.07 cfs**, considering Department rounding standards.

E. FLOW CALCULATIONS

Measured Method: Measured Method: 5 GAL Bucket Test = (5 gal / 9.81 sec) x 60 sec/min = 30.6 gpm
 = (5 gal / 9.46 sec) x 60 sec/min = 31.7 gpm
 = (5 gal / 9.97 sec) x 60 sec/min = 30.1 gpm
 Average of 3ea 5 GAL Bucket Tests = (30.6 gpm + 31.7 gpm + 30.1 gpm) / 3 = 30.8 gpm = 0.07 cfs

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:

Municipal annual volume & maximum diversion volume = **14.6 af** as calculated below:

- 1.4 acres (irrigation occurring as municipal use) x 3.0 afa = 4.2 af
- 250 people (80 employees & 170 guests) x 50 GPD x 213 days (4/1 – 10/31) = 2,662,500 GPY / 325,850 gal per afa = 8.2 af
- 75 people (employees & visitors) x 50 GPD x 151 days (11/1 – 3/31) = 566,250 GPY / 325,850 gal per afa = 1.7 af
- 8ea (RV sites with full hook-ups) x 50 GPD x 365 days per year = 146,000 GPY / 325,850 gal per afa = 0.5 af
- Municipal combined Total volume = 4.2 af + 8.2 af + 1.7 af + 0.5 af = **14.6 af**, considering department rounding standards.

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 9/18/2020 with the applicant's representative, Steve Meyer, showed a groundwater well (D0072367) diverting water for municipal purposes for Lutherhaven Ministries (Lutherhaven). The well was drilled complying with IDWR surface water seal requirements due to its proximity to Lake Coeur D'Alene. Three 5 gallon bucket flow measurements were completed from a frost free hydrant co-located with well, with average of the three measurements resulting in a flow rate of 5 gal / 9.7 sec x 60 sec/min = 30.9 gpm = 0.07 cfs, considering Department rounding standards. The diversion rate of **0.07 cfs** shall be carried forward and used for licensing purposes.

Ground water from the well is diverted via direct flow from the 5HP well pump to a 13,000 gallon storage reservoir, then gravity fed to service municipal uses at the POU. A pump house is co-located with the well, housing water conveyance system piping and electric control boxes. A flow meter was found to be installed allowing volume tracking in accordance with permit condition requirements as required, but specific notification by the Department to annually report diversion volume was not requested of the applicant, and the applicant was not maintaining accurate volume records as of the time of field exam.

Mr. Meyer provided a tour of Lutherhaven's POU during the exam, and photographs were taken to document municipal uses throughout the POU. A full service restroom is located nearby the lake for group activities along the beach front area of the property. Frost Free hydrants are located throughout the POU for water access for the numerous outdoor activities provided by Lutherhaven. There are eight full service RV slips that operate year round. Mr. Meyer identified that there are 50 full service restroom facilities associated with guest rooms, common areas, and 20+ cabin/lodge amenities that house in total 220 beds in little villages throughout the POU. Irrigation acreage was identified as a 1 acre sport field and small irrigated lawn space around main lodge structures that when combined equaled 1.4 acres. It was difficult to identify the irrigated acreage using Arcmap aerial imagery due to tree canopy coverage, but photographs were taken to provide visibility of the irrigation area. There is no designated POU for irrigation as it is designated as municipal beneficial use. There is one main lodge that provides food services for the employees and guests; water consumption for the lodge is rolled up in the 50 gallons per day per person that reside at Lutherhaven identified by Mr. Meyer.

Due to a lack of historic volume reports available for reference when developing the permit for licensing, data collected during the field exam was used to calculate annual volume toward licensing purposes. Lutherhaven has two distinct seasons, but operates year round. Municipal annual volume and Maximum diversion volume were developed as follows:

- 1.4 acres (irrigation occurring as municipal use) x 3.0 afa = 4.2 af
- 250 people (80 employees & 170 guests) x 50 GPD x 213 days (4/1 – 10/31) = 2,662,500 GPY / 325,850 gal per afa = 8.2 af
- 75 people (employees & visitors) x 50 GPD x 151 days (11/1 – 3/31) = 566,250 GPY / 325,850 gal per afa = 1.7 af
- 8ea (RV sites with full hook-ups) x 50 GPD x 365 days per year = 146,000 GPY / 325,850 gal per afa = 0.5 af
- Municipal combined Total volume = 4.2 af + 8.2 af + 1.7 af + 0.5 af = 14.6 af, considering department rounding standards.

The combined water usage of **14.6 af** is recommended for licensing purposes as the annual volume and maximum diversion volume.

Condition 046 was removed from the permit during licensing review. Condition 128 was updated to accurately describe the place of use for Lutherhaven Ministries. All other conditions on the permit shall remain on the license. Overlap concerns: Decreed right 95-11027 uses groundwater from a separate well POD for municipal purposes that overlap this permit's POU. The annual volume associated with this permit's municipal use is the same water system as 95-11027, toward the same municipal water usage; condition X35 was added in order to mitigate overlap concerns between rights 95-11027 and 95-

17185. Decreed right 95-11028 uses groundwater from a separate well POD for domestic purposes that overlap this permit's POD. The water usage covered under 95-11028 is a separate water system that services the Director's home for Lutherhaven Ministries, located in the northern portion of the applicant's property. As the systems are separate, there is no concern for overlap between 95-11028's domestic use and the municipal use associated with permit 95-17185; no overlap condition is recommended between rights 95-11028 and 95-17185. There are not any additional overlap concerns for this water right.

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>Rate of Diversion</u>	<u>Annual Volume</u>
MUNICIPAL	01/01 to 12/31	0.07 CFS	14.6 AF

Totals: 0.07 CFS 14.6 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 Luke Bates - Water Resource Agent

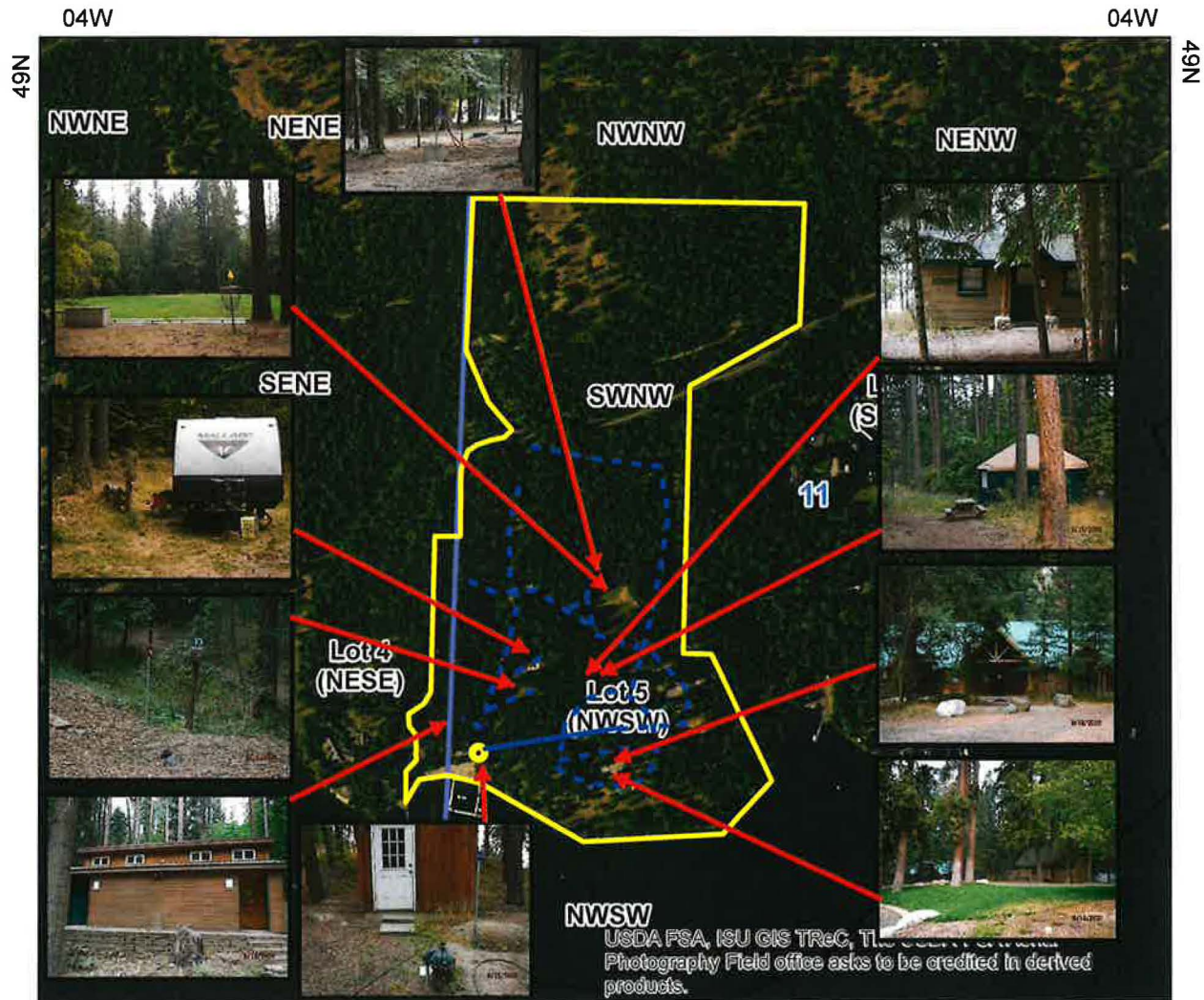
Field Examiner's Name Luke Bates Date 2/4/2021

Reviewer Adam Fink Date 2/16/2021

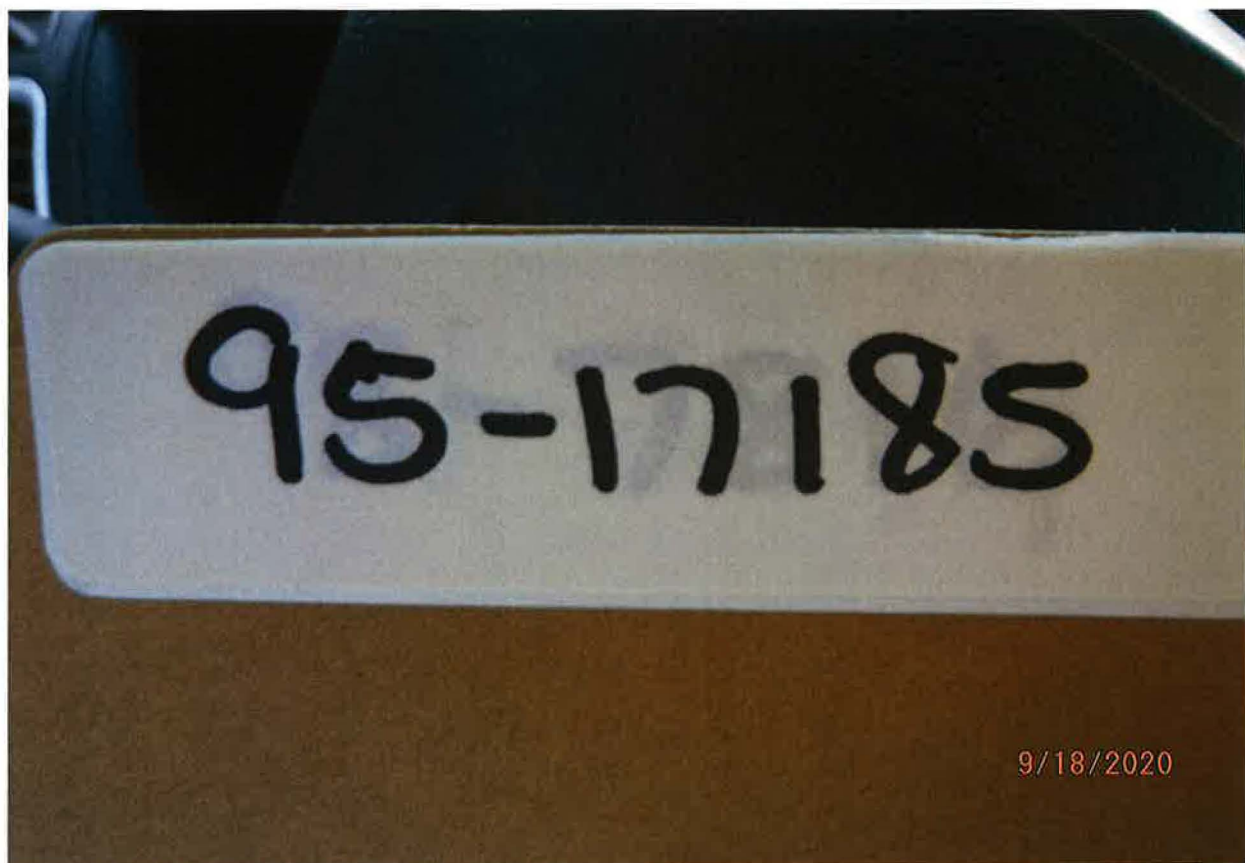
Attachment to Field Exam

95-17185

MUNICIPAL system diagram.



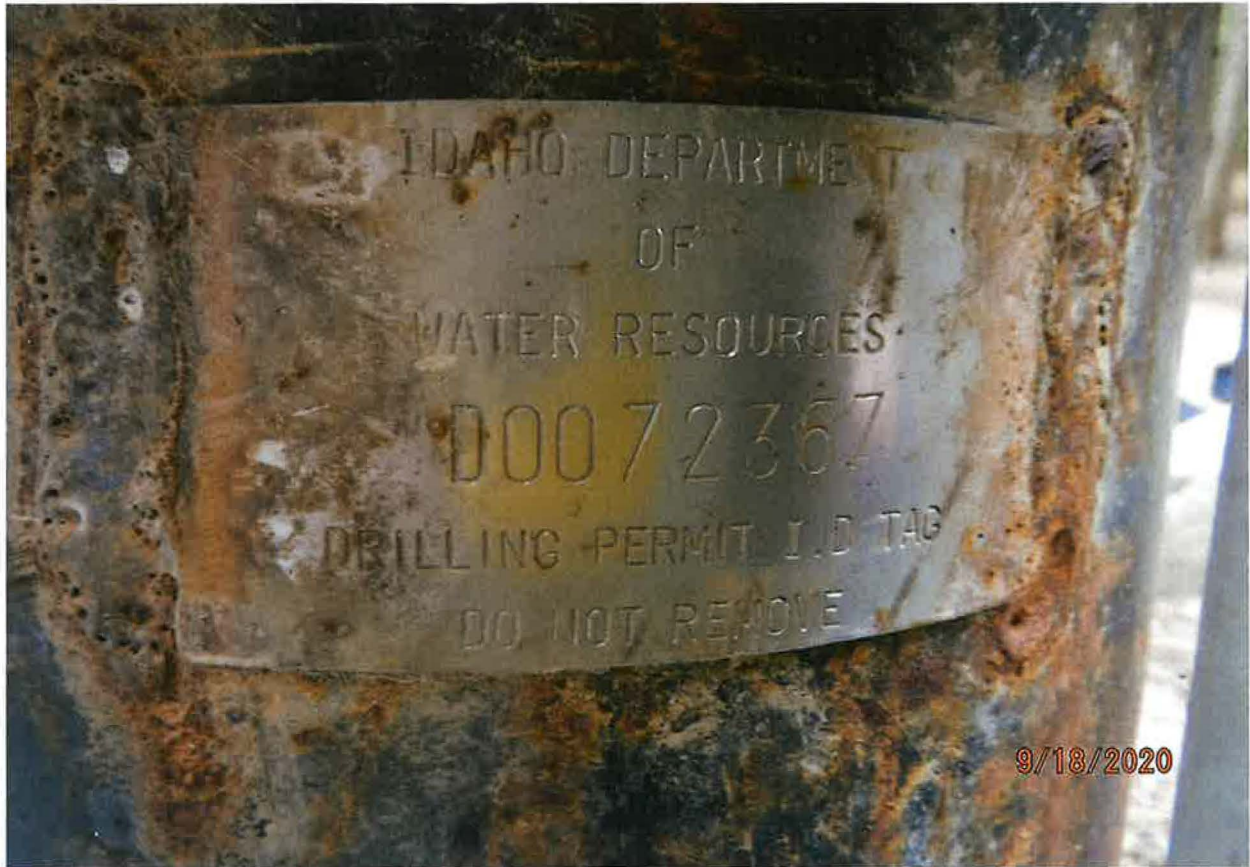
- Point of Diversion
- Water Service Area Boundary
- Townships
- PLS Sections
- Quarter Quarters



FIELD EXAM DATE 9/18/2020



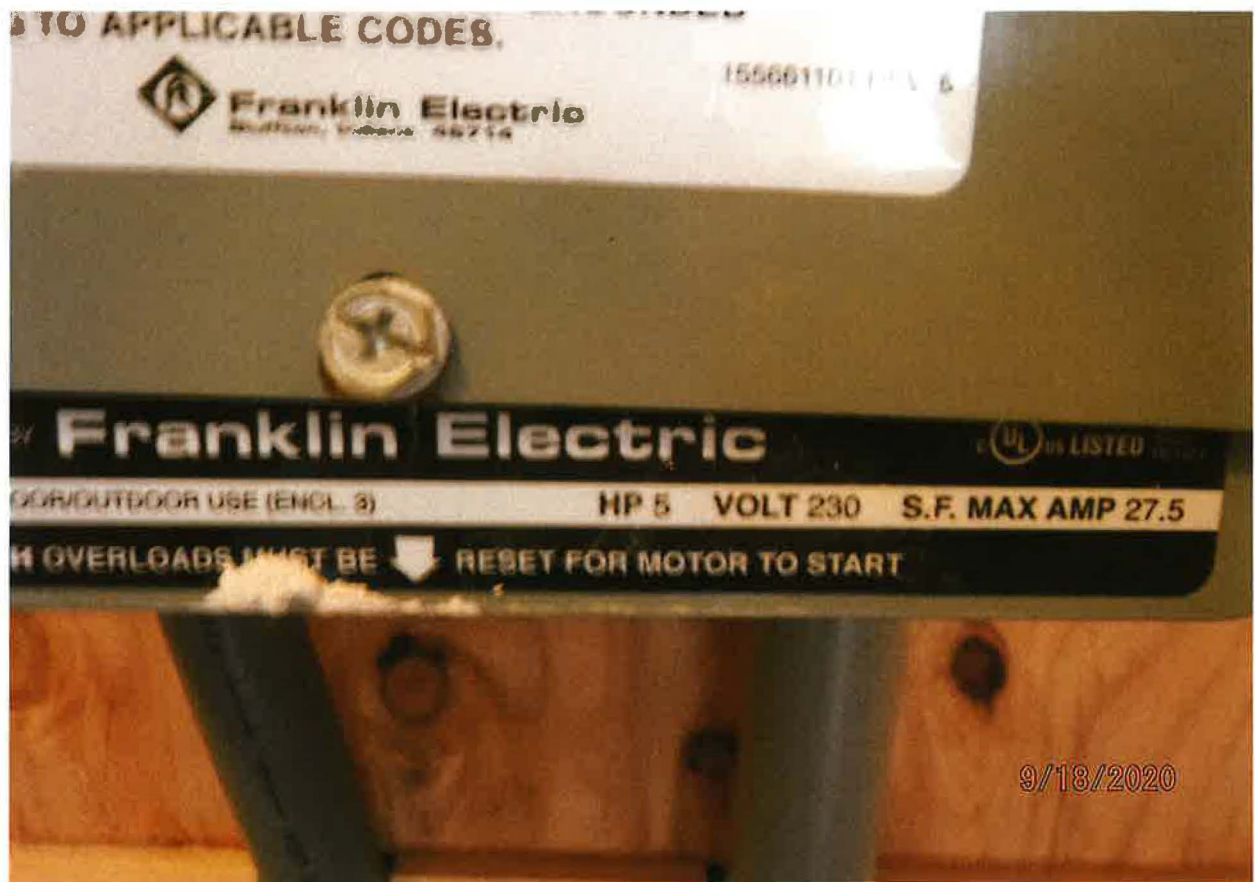
GROUNDWATER POD – WELL D0072367



WELL D-TAG D0072367



PUMP HOUSE



5 HP WELL PUMP



LAKE SHORE RESTROOMS



MUNICIPAL POU – 10 RV SITES WITH FULL HOOK-UPS





MUNICIPAL POU





MUNICIPAL POU





MUNICIPAL POU





MUNICIPAL POU





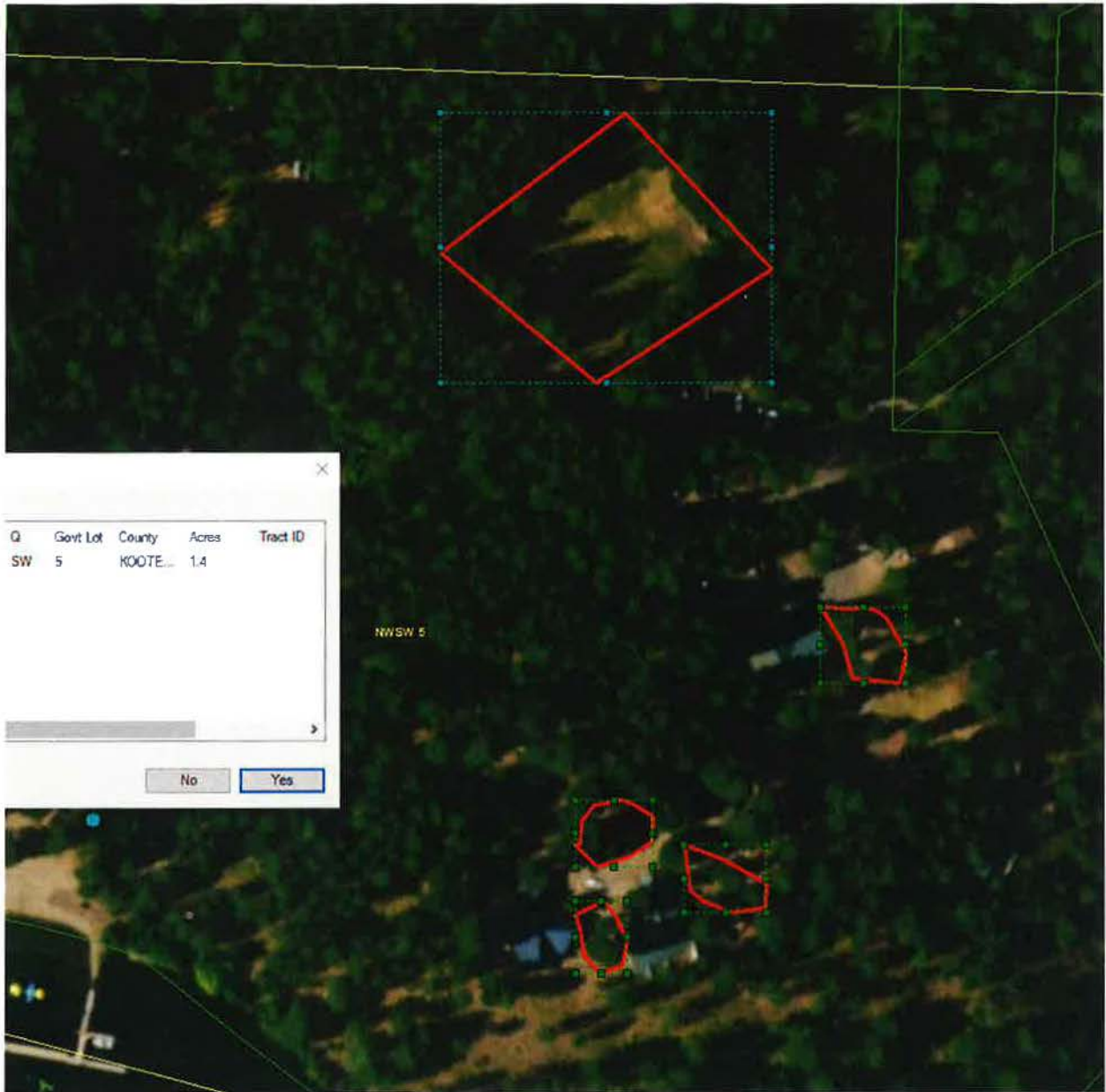
MUNICIPAL POU





MUNICIPAL POU





Q	Govt Lot	County	Acres	Tract ID
SW	5	KOOTE...	1.4	

No Yes