

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 98-7927
Exam Date: 08/19/2025

1. Current Owner:
DEER PARK RANCH LLC 574 LAURAL LN NAPLES ID 83847-5190
2. Accompanied by: Jeremiah Martin
Phone No: 208-304-7350
Address: Same as above
Relationship to permit Holder: Permit Holder's Representative & one of two Managers for Deer Park Ranch LLC.

3. SOURCE:
DEEP CREEK

Tributary
KOOTENAI RIVER

Method of Determination: ArcMap and DRG Layer.

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
98-7750	GROUND WATER	MUNICIPAL	LICENSE

Comments: Cabinet Mountains Water District owns/operates Licensed Right 98-7750 that has a large municipal service area which overlaps this Permit's storage pond and irrigation from storage POU(s). The water source is separate, and water systems are separate; the Permit Holder has a separate ground water well to meet their domestic use(s) and isn't served by the municipal provider. There isn't a concern for overlaps between the two water rights.

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

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

DEEP CREEK SW¼ SE¼, Sec. 25, Twp 61N, Rge 01W, B.M. BOUNDARY County

Method of Determination: GPS. POD is a 1/8-inch, screened 3-inch., PVC gravity fed pipeline in a collecting pool located at -116°24.114, 48°36.209. Photograph added to report illustrates submerged intake barrel in Deep Creek pooling.

PLACE OF USE: IRRIGATION STORAGE AND FIRE PROTECTION STORAGE

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
61N	01W	25													X				

PLACE OF USE: IRRIGATION FROM STORAGE

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
61N	01W	25													0.8			4.6	5.4
61N	01E	30									0.1	0.1							0.2
											L3	L4							

Total Acres: 5.6

Method of Determination: Beneficial Use Field Examination and ArcMap aerial imagery.

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
Deep Creek Diversion	N/A	N/A	Gravity flow pipeline	N/A	3-inch PVC pipeline
Deep Creek Diversion	Infinity	0.8	Model SP-600 centrifugal pump	Infinity	1.5-inch discharge pipe to pond

Note: gravity flow pipeline with in-line small electric centrifugal pump operates in the same diverting works pipeline.

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
5-Gal Bucket Measurement						

2. Measurements: Three 5-gal bucket measurements were attempted at the pond's inflow from creek pipeline; each measurement filled the 5-gal in less than 5.0 seconds making them unusable for licensing purposes (too much volatility in fill rate results in lost flow in measurement spilling out of vessel during fill). As a result, I used the 5-gal bucket measurements as a reference and have recommended the 0.23 cfs diversion to storage raga as authorized by Permit approval.

E. FLOW CALCULATIONS

Measured Method: 5-gal bucket fill measurements for reference.

- Permit authorized: 0.23 cfs as a Diversion to Storage rate.
- Beneficial Use Examination 5-GAL Bucket Tests = $(5 \text{ gal} / 3.41 \text{ sec}) \times 60 \text{ sec/min} = 87.98 \text{ gpm}$
 $= (5 \text{ gal} / 3.31 \text{ sec}) \times 60 \text{ sec/min} = 90.63 \text{ gpm}$
 $= (5 \text{ gal} / 3.17 \text{ sec}) \times 60 \text{ sec/min} = 94.64 \text{ gpm}$
 Average of 3 ea. 5-GAL Bucket Tests = $(87.98 \text{ gpm} + 90.63 \text{ gpm} + 94.64 \text{ gpm}) / 3 = 91.1 \text{ gpm} = 0.20 \text{ to } 0.21 \text{ cfs}$ considering department rounding standards.

The diverting system uses a 0.8 hp electric centrifugal pump operating in concert with gravity flow to boost the diversion rate. The max pump capacity is 325 liters per min or 86 gpm, which reasonably increases with gravity flow assists in diversion to the 94 + gpm range observed in my 5-gal bucket measurements.

- License recommendation = **0.23 cfs** based on permit authorized diversion rate and considering approximate 5-gal bucket fill rates with slight spillage during fill process. IDAPA 37.03.02 – Beneficial Use Examination Rules in part doesn't require a direct measurement if the total combined diversion rate doesn't exceed 0.24 cfs. In this case, the 0.23 cfs is reasonable compared to the approximate fill rates for the 5-gal bucket tests.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 5.6 \text{ ac} \times 3.0 \text{ afa} = 16.8 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \text{N/A irrigation from storage beneficial use doesn't receive a diversion rate for licensing purposes.}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \mathbf{16.8 \text{ af}}$$

2. Volume Calculations for Other Uses: See attached Pond Analysis Worksheet.

G. NARRATIVE/REMARKS/COMMENTS

The right holder was notified by certified letter that the permit had lapsed on 2/8/2024. The right holder submitted a Statement of Completion form which was received on 3/18/2024. On 1/14/2025 the Department mailed the reinstatement of permit Order and 98-7927 was added to Northern Regional Office's field exam roster in early 2025.

I conducted a beneficial use field exam on 8/19/2025 with the right holder's representative, Jeremiah Martin, which showed water being diverted from Deep Creek water source for storage and irrigation from storage related uses. The permit authorized two (2) PODs due to close proximity of the diversion point to a PLSS QQ/Q boundary line. During the exam I GPS located the approximate position of the intake box in Deep Creek, which aligns with the SW1/4SE1/4 of Section 25. I removed the 2nd POD that was associated with the SE1/4SE1/4 of Section 25 as only one POD was developed under the permit.

At the POD, a historic rocked pool was used in Deep Creek, with a submersed screened intake box to 3-inch PVC conveyance pipeline. The pipeline routes within the stream channel northward & downstream approximately 700 ft where it leaves the creek channel, routes beneath the road, and runs by buried pipeline into a storage pond. At the excavated storage pond an electric 0.8 Hp pump is used to boost gravity flow from Deep Creek, as the gravity flow was not sufficient to keep up with topping the storage pond off during summer irrigation months. I attempted to capture 5-gal bucket measurements which resulted in fill rates of less than 5 seconds per sample indicating the diversion rate is greater than 0.20 cfs. I have recommended the permit authorized diversion rate of 0.23 cfs based on pump information and referencing my 5-gal bucket fill rates detailed above on PG2 of this report. **0.23 cfs** is the recommended Diversion to Storage and Maximum Diversion Rate for licensing purposes.

Deep Creek water is impounded in a small roadside storage pond for Fire Protection Storage and Irrigation Storage beneficial uses (reference pond analysis worksheet). During the exam I took photographs to illustrate the POD, conveyance pipeline, and storage pond as developed under the permit with size and volume elements detailed below:

- The storage pond is 0.7 ac is surface area, has a maximum depth of 15 ft, average depth of 6 ft, pond capacity equaling 4.2 af, seepage and evaporation loss rates equaling 1.7 af, and total quantity to keep pond full year-round equaling 5.9 af. **5.9 af** is recommended as the Fire Protection Storage annual volume for licensing purposes.
- When in priority the right holder is authorized to draw the pond down for irrigation from storage beneficial use and multiple fill the pond throughout the year for up to 16.8 af based on 5.6 acres of irrigation from storage acreage evaluated at time of exam. The **16.8 af** is assigned to the Irrigation Storage and Irrigation from Storage beneficial uses which are not additive toward the maximum diversion volume of 5.9 af + 16.8 af = **22.7 af** recommended for licensing purposes.

During licensing review, I noted the irrigation storage beneficial use season of use was designated from 04/01 to 10/31. I have clarified the season of use to reflect 01/01 to 12/31 for licensing purposes; the right holder is authorized to storage irrigation water year-round up to 5.9 af which is the Fire Protection Storage annual volume, then apply multiple fills for irrigation from storage throughout the irrigating season of use which is 4/1 to 10/31. No amendment to permit was recommended for this clarification of season of use.

The right holder has developed the Fire Protection Storage beneficial use which includes a dedicated fire truck fill port located on the NW corner of the storage pond alongside the roadway right-of-way. Photographs illustrate the storage pond is staged to deliver water via submerged 6-inch fire truck fill point.

A 15 hp submersible Pentek motor paired with Goulds pump is used to pump water from the storage pond via buried pipeline routed along driveway south and east uphill to the irrigation from storage POU. During the exam Mr. Martin, his son, and I turned the irrigation pump on so that I could observe active irrigation during the exam. The irrigation POU consists of small pasture plots separated by roads, fenced areas, and hoop garden development. The permit authorized development of up to 10 acres irrigation from storage acreage; during the exam I used field maps to sketch the irrigation components and POU; during licensing review I used Arc Pro GIS, Google Earth Pro, and Sentinel satellite imagery to evaluate active irrigation which occurred from the storage pond during the development period.

The Permit authorized both irrigation as a direct flow beneficial use and irrigation from storage as a volume based beneficial use. During the exam I validated that the normal operating practices as developed is to divert from creek to storage pond and a separate pump and pipeline distributes water from the pond to the irrigating POU. Based on development I've removed the irrigation direct flow beneficial use from the permit during licensing review. All irrigation is associated with "from storage" by system design.

I took several photographs to help illustrate the irrigation from storage POU which are added to this report. At time of exam in late August all the field plots had been recently disked/dozed except for lawn spaces around residence(s), hoop garden plot and an orchard tree plot. I had to rely on the extent of irrigation conveyance system components and past year aerial imagery to evaluate active irrigation. The main fields use a main pipeline to irrigation riser(s) with big gun sprinklers at intervals to irrigation. Riser pipes were found at interval and illustrated on my field exam map. Additional hand line is used to reach portions of the POU that aren't actively irrigated by main stem riser pipe-to-sprinkler(s).

The development period for the permit commenced on 2/13/2014 and closed on 3/18/2024 with submission of the statement of completion form. The storage pond and irrigation from storage components were not actively developed until the 2016-2017 irrigation season based on aerial imagery analysis. Sentinel satellite imagery shows that the southernmost field plot was not developed for irrigation during the development period and I've removed that acreage from the POU inventory. Using Arc Pro GIS I traced out the irrigation from storage POU which consists of 5.7 acres. The total annual volume authorized equals $5.6 \text{ ac} \times 3.0 \text{ afa} = 16.8 \text{ af}$ annually. A new application for permit submission will be required by the property owners if they elect to pursue active irrigation in the southern 3.0-to-3.5-acre field plot.

During licensing review, I made the following recommendations/changes to conditions of approval:

- Removal of condition 26A based on compliance by the right holder.

- Replace R62 with R58 to accurately describe the 3.0 afa per acre allowance for irrigation at field headgate for this region of the state.
- I revised condition 259 to reflect accurate storage and from storage volumetric data following the field examination.

All other conditions on the Permit shall be carried forward to the license. There are no overlapping water right concerns toward licensing Permit 98-7927.

NOTE: the statement of completion was submitted for this Permit prior to commencement of the Kootenai River Basin Adjudication (KRBA) process. With KRBA commencement date of 3/7/2026, this water right is required to have a Notice of Claim based on a license filed by the right holder to keep the water right active through the adjudication process as it works toward becoming a court decreed 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>
IRRIGATION STORAGE	01/01 to 10/31		16.8 AF
IRRIGATION FROM STORAGE	04/01 to 10/31		16.8 AF
FIRE PROTECTION STORAGE	01/01 to 12/31		5.9 AF
DIVERSION TO STORAGE	01/01 to 12/31	0.23 CFS	
<u>Totals:</u>		0.23 CFS	22.7 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 – Sr Water Resource Agent

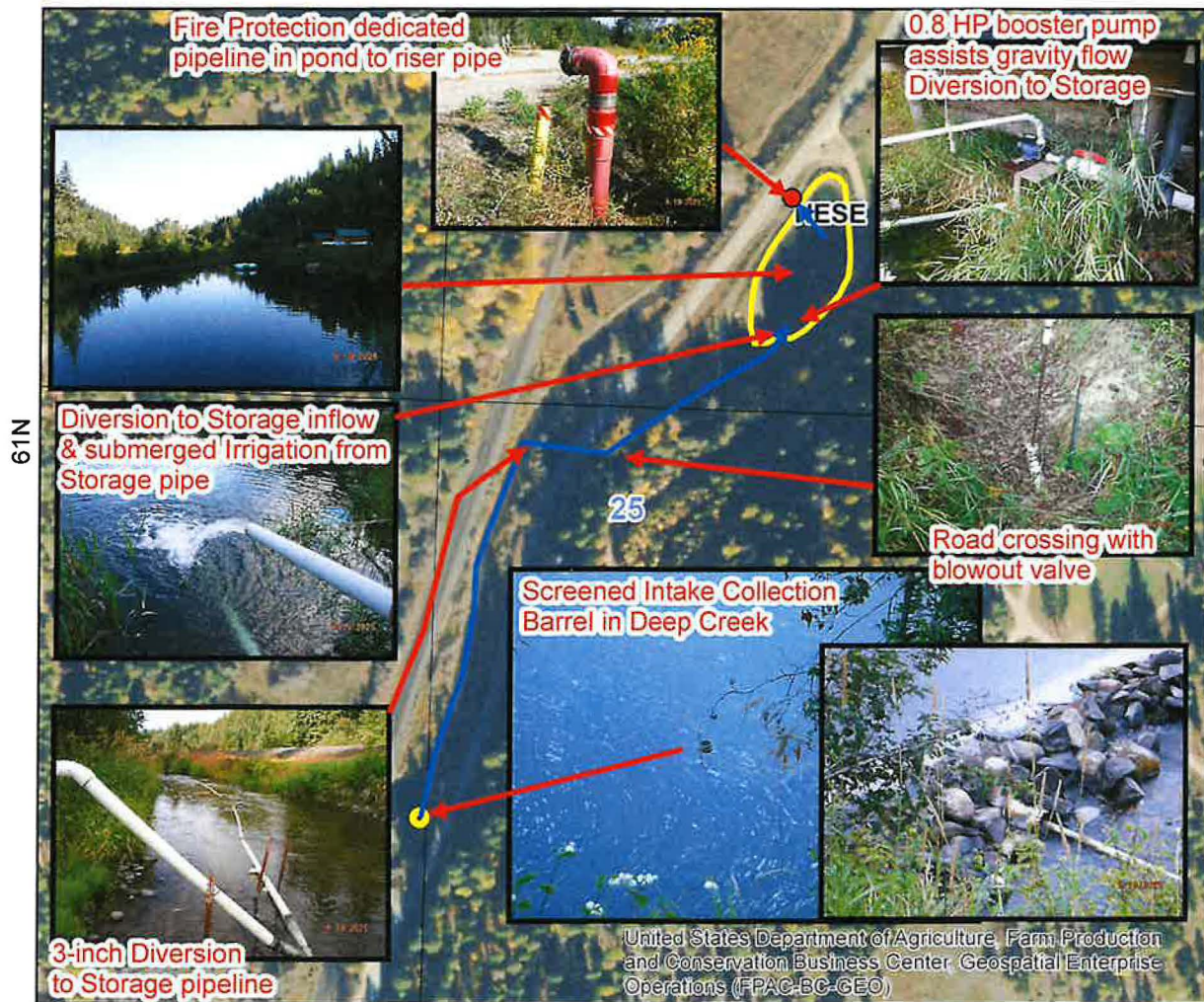
Field Examiner's Name Date 5/28/2026

Reviewer Michelle Richman Date 7/23/26

State of Idaho
Department of Water Resources
Attachment to Field Exam
98-7927

This map depicts the DIVERSION TO STORAGE, IRRIGATION STORAGE, and FIRE PROTECTION STORAGE system diagram.

01W



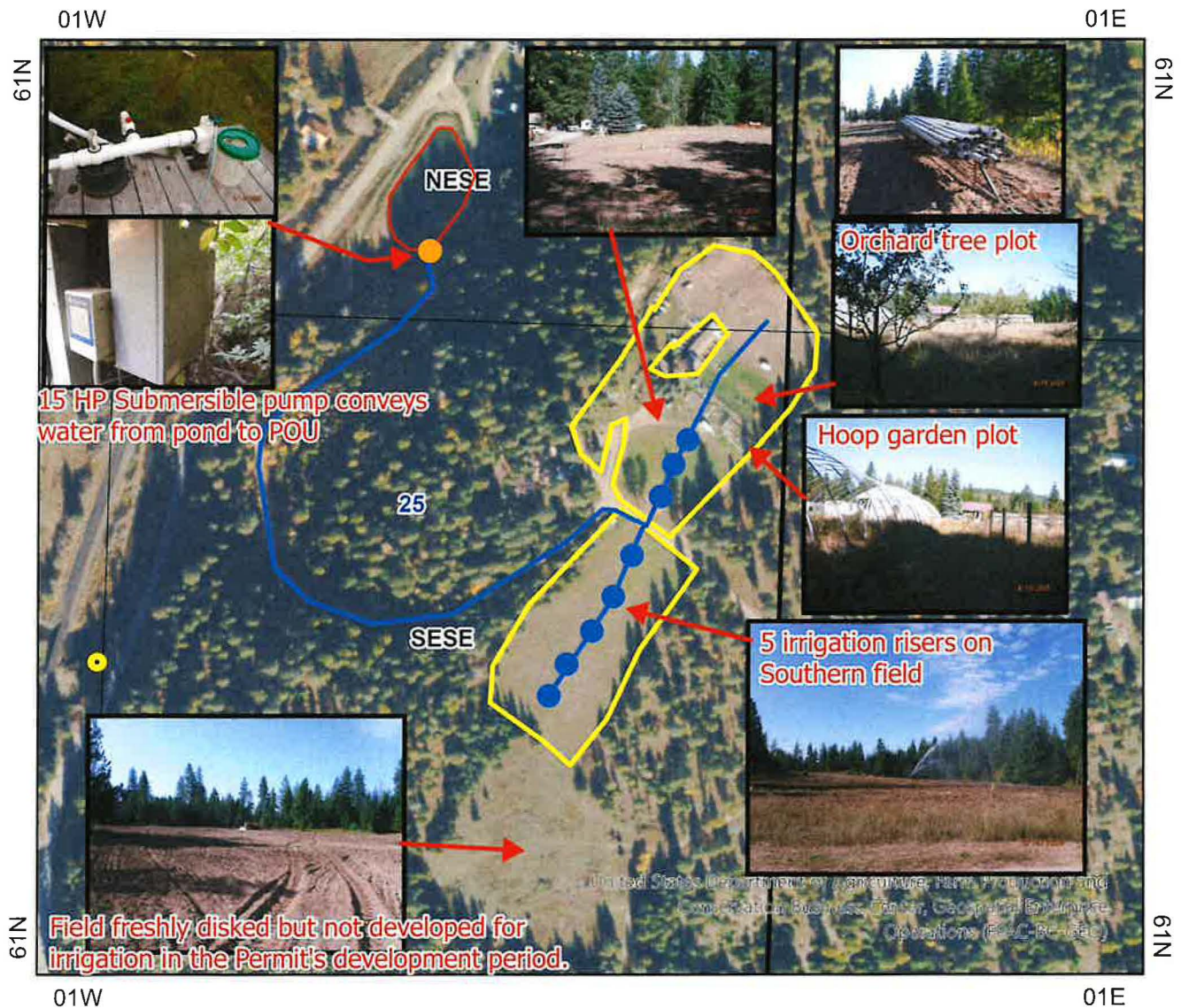
0 0.0375 0.075 0.15 Miles

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

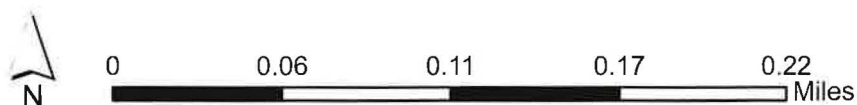


State of Idaho
Department of Water Resources
Attachment to Field Exam
98-7927

This map depicts the IRRIGATION FROM STORAGE system diagram.



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



Imagery: 2023 Aerial Photography

Total Storage Calculations

FILE NUMBER	98-7927
REVIEWER	L.BATES
DATE	12/30/2025

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.

User Input
Calculated value
Formula Explanations

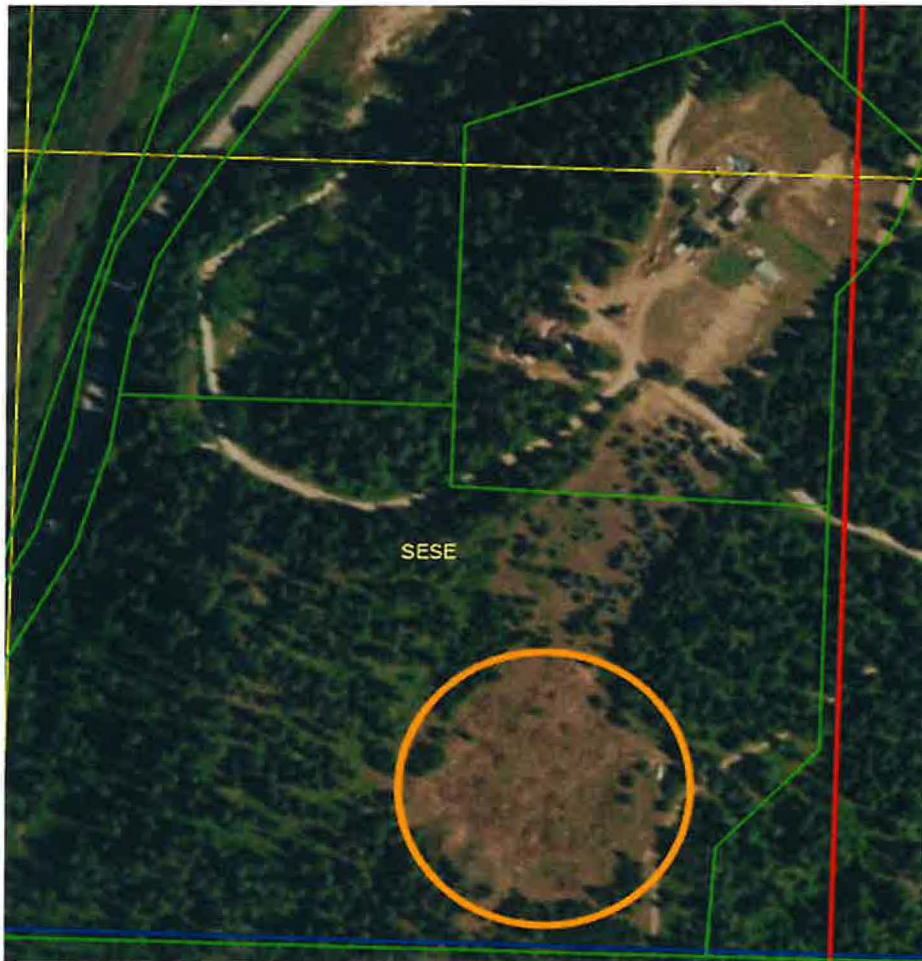
Surface Area (AC.)	0.7	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	6	"Average Pond Depth" depicts the actual depth of the pond either measured or estimated. Note: If you know the maximum depth and not the average depth, the Field Examiner's Handbook suggests multiplying the maximum depth by 0.4 to get the average depth, or you can use any method that seems reasonable to attain average depth.
Pond Capacity (AF)	4.2	Pond Capacity is calculated by multiplying the Pond Surface Area by the Average Pond Depth. If you know the capacity, divide the capacity by surface area and enter the average pond depth in the space above. <i>Note: If pond capacity is determined using a method shown on the "Pond Capacity" sheet, the user may need to modify the value of "Pond Capacity" (cell B9) manually. Note that if the value is modified manually, the formula will be altered for future use.</i>
Multiple Fill Volume Above Initial Fill to Fulfill From Storage Needs- "Multiple Fills" (AF)	16.8	The "Multiple Fill Volume Above Initial Fill" is the acre-feet of water required to meet a <i>from storage</i> component if the <i>from storage</i> component exceeds a one time fill. This section should not include the amount of water needed to fill the pond initially or the amount of water needed to maintain the pond level due to evaporation or seepage. For example: if a pond has a capacity of 5 acre feet and 2.5 acre feet of seepage and evaporation, but the pond is used for irrigation that requires 10 acre feet of from storage for the irrigation use, then you would insert 5 acre feet into this location (10 acre feet needed - 5 acre feet from the initial fill = 5 acre feet of additional storage needed). <i>Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.</i>
Estimated Seepage Loss (AF)	0.8	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.9	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	22.7	The "Total Volume Required" is calculated by adding the Pond Capacity, Multiple Fills, Seepage Loss, and Evaporation Loss amounts to determine the total amount of storage required.

98-7927

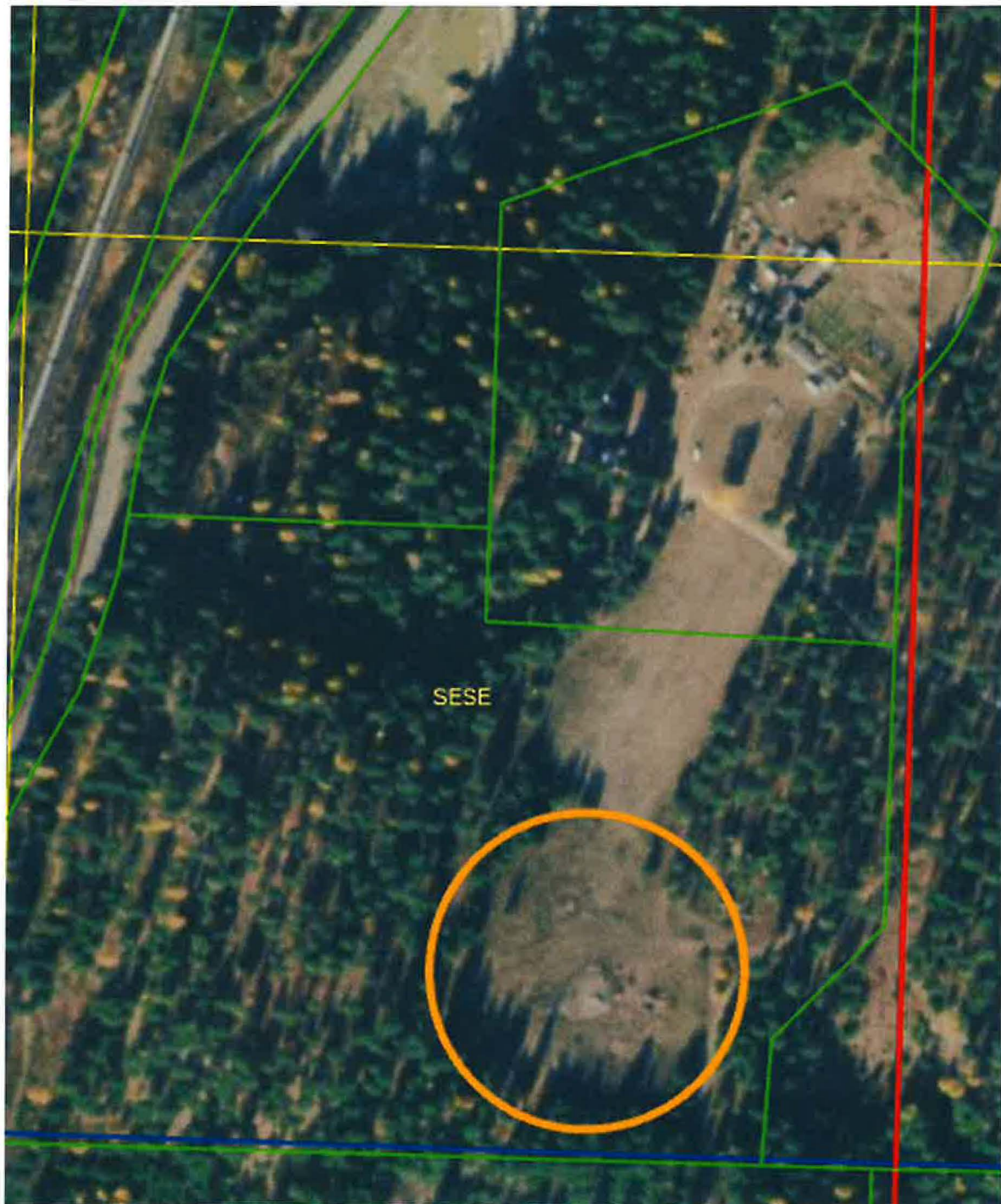
IRRIGATION FROM STORAGE EVALUATION

COMPARISION OF AERIAL IMAGERY TO SENTINEL SATELLITE AERIAL IMAGERY

I used satellite imagery coupled with Arc Pro GIS aerial imagery to validate whether irrigation occurred on the southern pasture of the POU located in Twp 61N, Rge 04W, Section 25, SE $\frac{1}{4}$ SE $\frac{1}{4}$ as shown within the ORANGE circle graphic below:



2015-year Arc Pro aerial imagery – trees had been removed from this pasture plot by 2015 but not developed for irrigation use. Note treed pasture to the north also was not actively irrigated in 2015.



Year – 2017 Arc Pro GIS aerial imagery. Southern pasture plot still does not represent active irrigation. Note pasture plot to north has been cultivated (disked) at least once between 2015 and 2017.

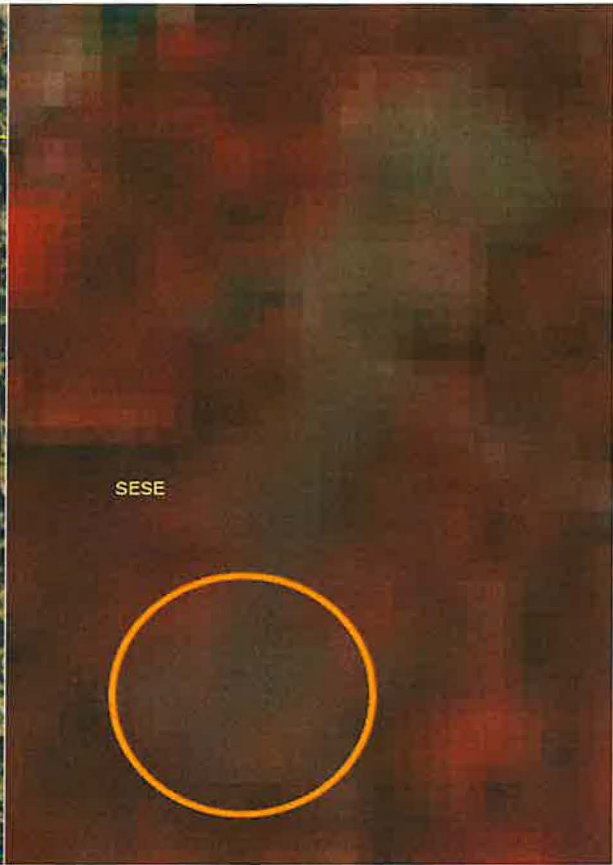


Sentinel satellite aerial imagery – Label T11UNP_S2A_20160823_CIR.sid.lyr

The satellite imagery with capture date 8/23/2016 illustrates dry agriculture in the southern field within the orange border. Note minor irrigation use in the field to north shown by slight red hues and even more intense irrigation occurring across roadway to north in Irrigation from Storage POU illustrated by deep red hue.



YR 2023 Arc Pro GIS aerial imagery

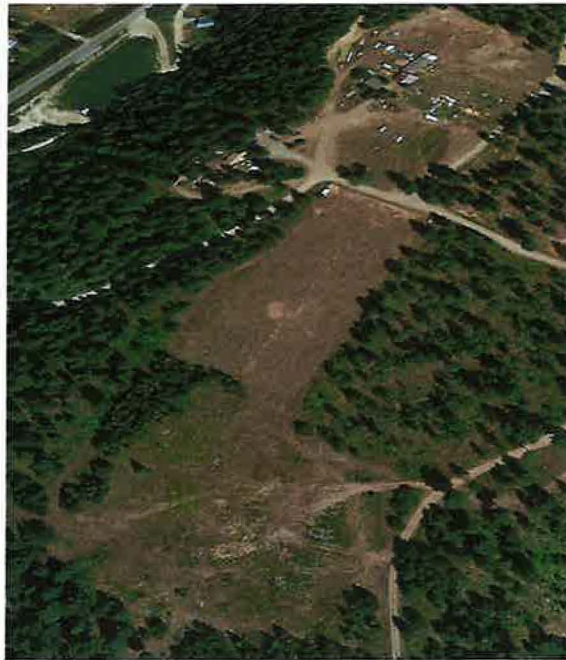


Sentinel T11UNP-S2A-20230728_CIR.sid.lyr

Aerial imagery for year 2023 illustrates some active irrigation occurring north of the south plot (within orange graphic border) but no active irrigation in the southern field. This is supported by YR 2023 Sentinel satellite imagery.



7/2014 Google Earth imagery



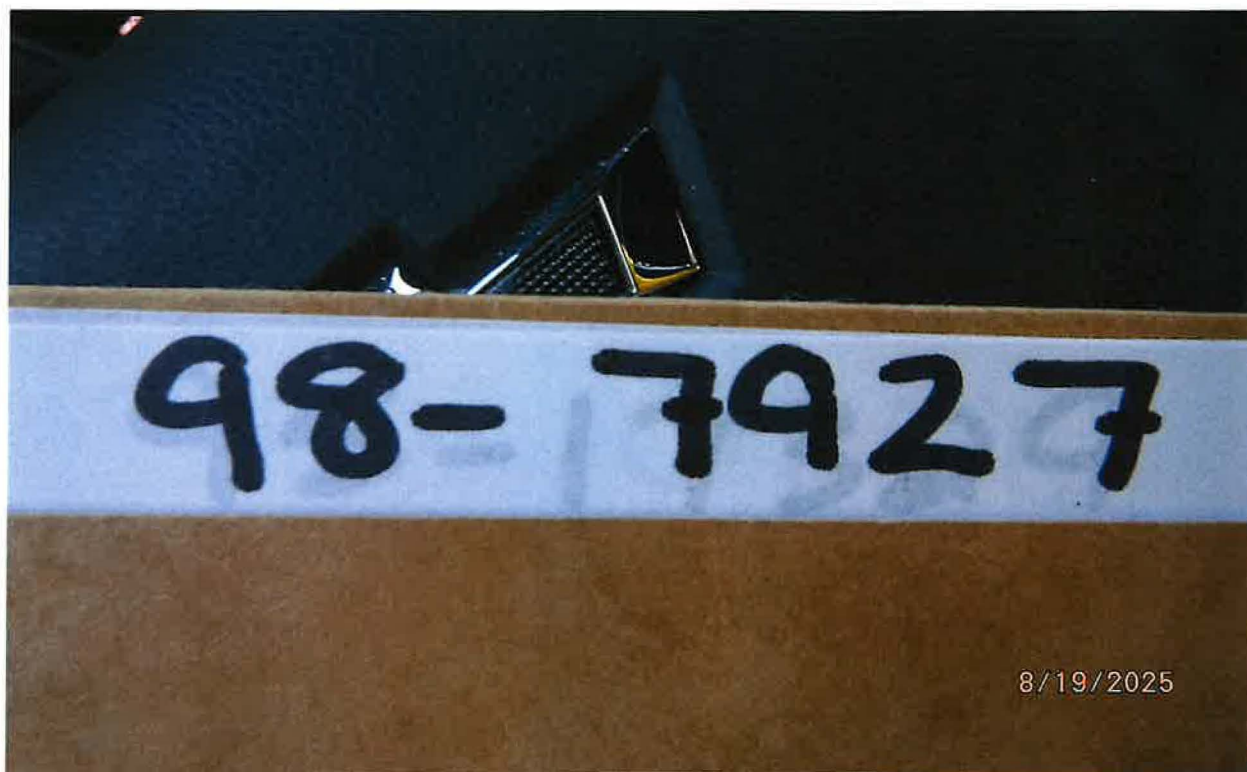
8/2019 Google Earth imagery



Yr 2025 imagery doesn't support active irrigation in the southern pasture field.

6/2025 Google Earth imagery - All imagery on this page retrieved from Google Earth Pro





BENEFICIAL USE FIELD EXAM DATE 8/19/2025



POD – COLLECTION DEVICE IN POOL IN DEEP CREEK (COMPLETELY SUBMERGED WITH DISCHARGE PIPE



POD – 3-INCH PVC PIPELINE FROM COLLECTION POOL ROUTED DOWN STREAMBED, ACROSS ROADWAY, AND BY BURIED PIPELINE TO STORAGE POND



WATER CONVEYANCE SYSTEM – GRAVITY FLOW IN 3-INCH PVC PIPELIEN DOWN STREAM BED; PHOTO WHERE PIPLINE EXITS STREAM BED AND ROUTES BENEATH ROADWAY



CONVEYANCE PIPELIEN ON EAST SIDE OF ROAD WITH BLOW-OUT VALVE. PIPELINE RUNS TO GROUND UP TO STORAGE POND



CONVEYANCE SYSTEM ENTERING STORAGE POND – AT THIS POINT GRAVITY FLOW IS ASSISTED BY A SMALL 0.8 HP CENTRIFUGAL PUMP TO STORAGE – DIVERSION TO STORAGE BENEFICIAL USE



0.8 HP CENTRIFUGAL DIVERSION TO STORAGE (ASSISTS GRAVITY FLOW) INFINITY BRAND MODEL SP-600 PUMP





DIVERSION TO STORAGE PIPELINE (INFLOW TO POND) AND IRRIGATION FROM STORAGE (SUBMERGED PIPELINE)



POU – IRRIGATION STORAGE AND FIRE PROTECTION STORAGE POND



FIRE PROTECTION SUBMERGED PIPELINE TO TENDER TRUCK FILL POINT LOCATED ON NORTHWEST REACH OF STORAGE POND



FIRE TRUCK FILL POINT FROM STORAGE POND LOCATED IN BETWEEN ROADWAY AND POND



IRRIGATION FROM STORAGE CONVEYANCE SYSTEM – PENTEK/GOULDS MOTOR/PUMP FROM POND UP HILL TO IRRIGATION FROM STORAGE POU



IRRIGATION FROM STORAGE CONVEYANCE SYSTEM – 15 HP SUBMERSIBLE PUMP/MOTOR FROM STORAGE POND TO POU FOR IRRIGATION



IRRIGATION FROM STORAGE POU – MAIN DISTRUBUTION BURIED PIPELINE TO POU, TEE TO TWO LATERAL BURIED LINES WITH IRRIGATION RISER PIPES AND SPRINKLERS



IRRIGATION RISER IN FIELD NEAR RESIDENCE



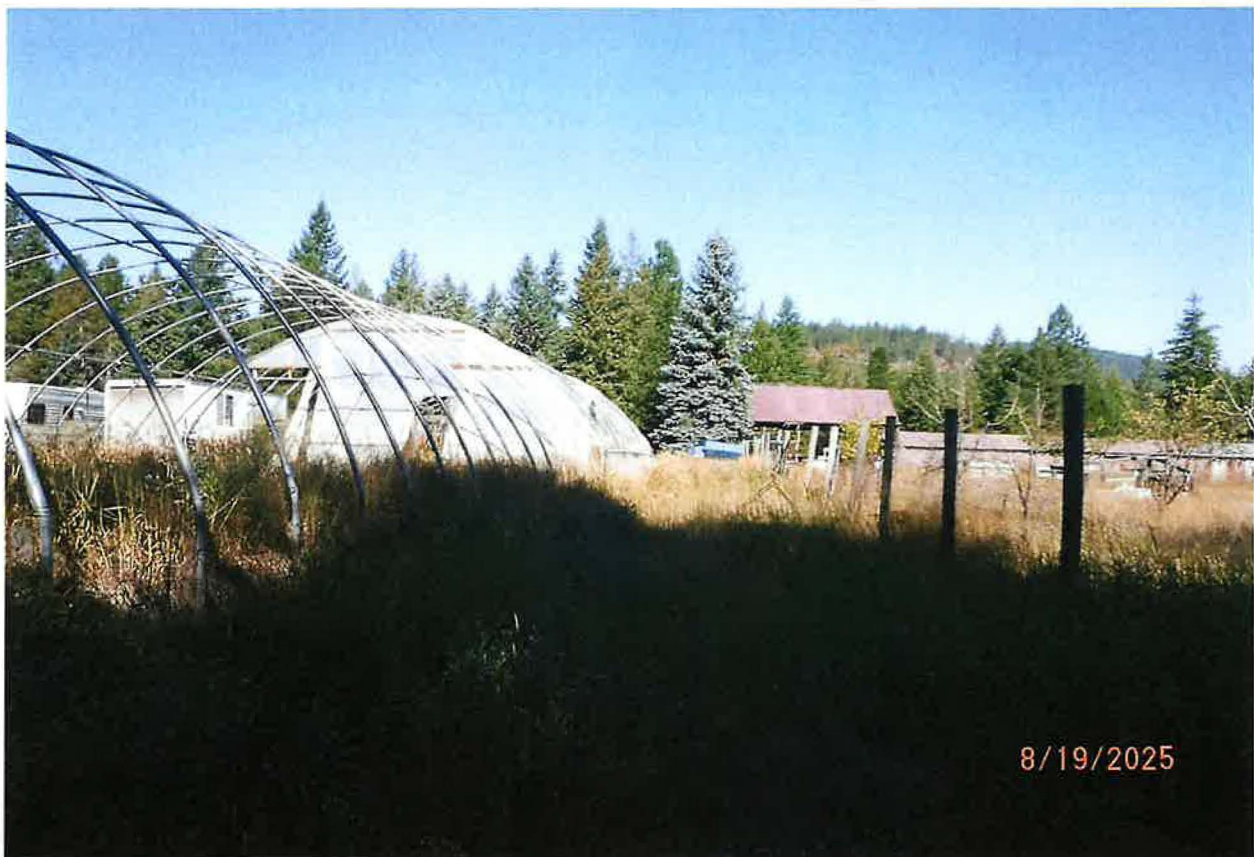
IRRIGATION FROM STORAGE POU – FRESHLY TILLED PASTURELAND WITH 5EA IRRIGATION RISER PIPES
(WHITE RISERS IN PHOTO 2EA)



HANDLINE USED FROM SOUTHERN MOST RISER CONNECTION TO EXTEND IRRIGATION BY HANDLINE
SPRINKLER ON SOUTHERN MOST FIELD OF POU



HAND LINE ON SITE FOR USE AS PART OF IRRIGATION FROM STORAGE POU



IRRIGATION FROM STORAGE POU – HOOP STRUCTURE WAS NOT ACTIVELY USED THIS SEASON;
ORCHARD TREE PLOT ON R/H OF IMAGE



IRRIGATION FROM STORAGE POU – ORCHARD TREE PLOT



IRRIGATION FROM STORAGE POU – NORTHERN MOST FIELD HISTORICALLY (WITHIN DEVELOPMENT PERIOD) WATERED WITH HANDLINE FROM IRRIGATION RISER PIPE