

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 97-8077
Exam Date: 06/28/2023

1. Current Owner:
ELLEN M ARCHER 1686 PETERSON RD PRIEST RIVER ID 83856-4907 AND/OR
JEFFREY T ARCHER 1686 PETERSON RD PRIEST RIVER ID 83856-4907
2. Accompanied by: Jeffrey T Archer
Phone No: 208-592-4562
Address: Same as above
Relationship to permit Holder: Permit Holder

3. **SOURCE:**
GROUND WATER
UNNAMED STREAM

Tributary
SINKS
SINKS

Method of Determination: ArcMap and DRG Layer.

B. OVERLAP REVIEW

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

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER NE¼ NW¼, Sec. 23, Twp 57N, Rge 05W, B.M. BONNER County
UNNAMED STREAM NW¼ NW¼, Sec. 23, Twp 57N, Rge 05W, B.M. BONNER County

Method of Determination: Beneficial use exam and GPS – Northeastern in-pond Groundwater source; Southwestern pond Unnamed Stream impounded by earthen dam at -116° 55.925, 48° 16.755.

PLACE OF USE: STOCKWATER 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	
57N	05W	23					X	X											

Method of Determination: Beneficial use field exam, ArcMap aerial imagery, and Bonner County tax parcel map imagery.

3.
 - X Delivery System Diagram Attached (required). Indicate all major components and distances between components. 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
IN-POND GW SOURCE	N/A	N/A	NORTHEASTERN POND	N/A	N/A
EARTHEN DAM	N/A	N/A	INSTREAM SOUTHWESTERN POND	N/A	N/A

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
NONE						

2. Measurements: N/A

E. FLOW CALCULATIONS

Measured Method: N/A

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A

2. Volume Calculations for Other Uses: See two attached pond analysis worksheets.

Stockwater annual volume = 100 head cattle x 12 gpd x 365 days = 435,000 gals / 325,850 gal per af = **1.3 af** considering Department rounding standards.

G. NARRATIVE/REMARKS/COMMENTS

State Office staff performed a beneficial use field exam on 6/28/2025 with the Permit Holders; following the exam a period of 2 years passed without this Permit being finalized for license recommendation. State Office staff recommended a follow-up site visit to obtain additional information necessary to validate the "Unnamed Stream" source for licensing purposes.

I conducted a second beneficial use field exam on 10/6/2025 with the Permit Holder, Jeffrey Archer, which showed two storage ponds impounding water for stockwater use and fire protection purposes. The upper pond, the northeastern storage pond, has an in-pond ground water source that fills the pond. During high water table periods of the year overflow discharge from the NE storage pond discharges via an 8-inch culvert and flows overland in a natural channel downstream to the lower, Southwestern storage pond, in an Unnamed Stream channel. I validated the stream channel in October which was heavily grassed over; the channel was approximately 1-ft deep and 1-to-2-ft wide as it meandered down stream to the lower pond.

Both the overflow discharge of ground water and subsequent unnamed stream flow which is unused by stock animals seeps back to ground within each pond during late summer months and/or "sinks" as an unnamed tributary flows SW from the lower pond in a stream channel clearly visible in aerial imagery prior to sinking into the Permit Holder's pastureland. Both storage ponds are considered on-stream and there isn't a diversion rate component associated with this water right.

The Fire Protection Storage and Stockwater Storage POU consists of the two storage ponds with stock drinking directly from the pond and/or water being pumped to a stock tank co-located with the storage pond; the stock tank placement mitigates stock from eroding the lower pond earthen dam structure and I'm still considering the beneficial use as storage related versus direct flow due to proximity of the stock tank alongside the pond. I collected photographs during the site visit which was in late fall when water levels were at their lowest according to the Permit Holder. This is reasonable considering the abnormally dry summer conditions for 2025 in this region of the State and no water was flowing from the upper pond to the lower pond in series. During licensing review, I used ArcMap aerial imagery to accurately trace out the ponds' surface area(s) assigning the POU. PODs were designated based on in-pond approximate ground water source and GPS for the lower pond's earthen dam. The two pond's size and volume elements are designated below:

- The upper Northeastern pond has a surface area of 0.3 acres considering Department rounding standards, a maximum depth equaling 10 ft, an average depth of 4ft, a pond capacity equal to 1.2 af, and 0.5 af of loss due to evaporation. No seepage was factored due to the ground water source filling from within the high-water line of the pond. The total volume requirement to maintain the pond full annually equals 1.7 af.
- The lower Southwestern pond has a surface area of 0.1 acres considering Department rounding standards, a maximum depth equaling 10 ft, an average depth of 4ft, a pond capacity equal to 0.4 af, and 0.3 af of loss due to evaporation. No seepage was factored due to the ground water source filling from within the high-water line of the pond. The total volume requirement to maintain the pond full annually equals 0.7 af.
- The Fire Protection Storage annual volume is equivalent to the total storage value for each pond = **2.4 af** annually.

The two ponds are used by the Permit Holders for stockwater purposes for up to 100 head mixed stock, primarily up to 50 breeding pairs of beef locker cattle. The annual volume for stockwater is recommended based on the calculations above, or **1.3 af** considering Department rounding standards. The maximum diversion volume recommended for licensing purposes = **3.7 af**. The recommended value is greatly reduced from the 9.2 af authorized for development under the Permit, but the size of each pond as developed along with the depth of each pond is considerably less than permitted resulting in a reduction at time of beneficial use exam and license validation. Reference pond analysis worksheets on file under the Permit's approval along with the two pond analysis worksheets I prepared during licensing review.

I have revised condition 219 describing storage pond(s) volumetric data as calculated using the pond analysis worksheets following the field exam. I removed condition 220 based on verbal directive from Deputy Director – Shelley Keen. I removed condition X02 based on condition description guidance to remove at time of licensing. All other conditions on the Permit shall be carried forward to licensing. There aren't any overlapping water right concerns toward licensing 97-8077.

Have conditions of permit approval been met? X Yes No

H. RECOMMENDATIONS

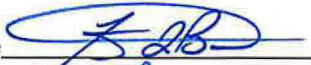
1. Recommended Amounts

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Annual Volume</u>
STOCKWATER STORAGE	01/01 to 12/31	1.3 AF
FIRE PROTECTION STORAGE	01/01 to 12/31	2.4 AF

Totals: 3.7 AF

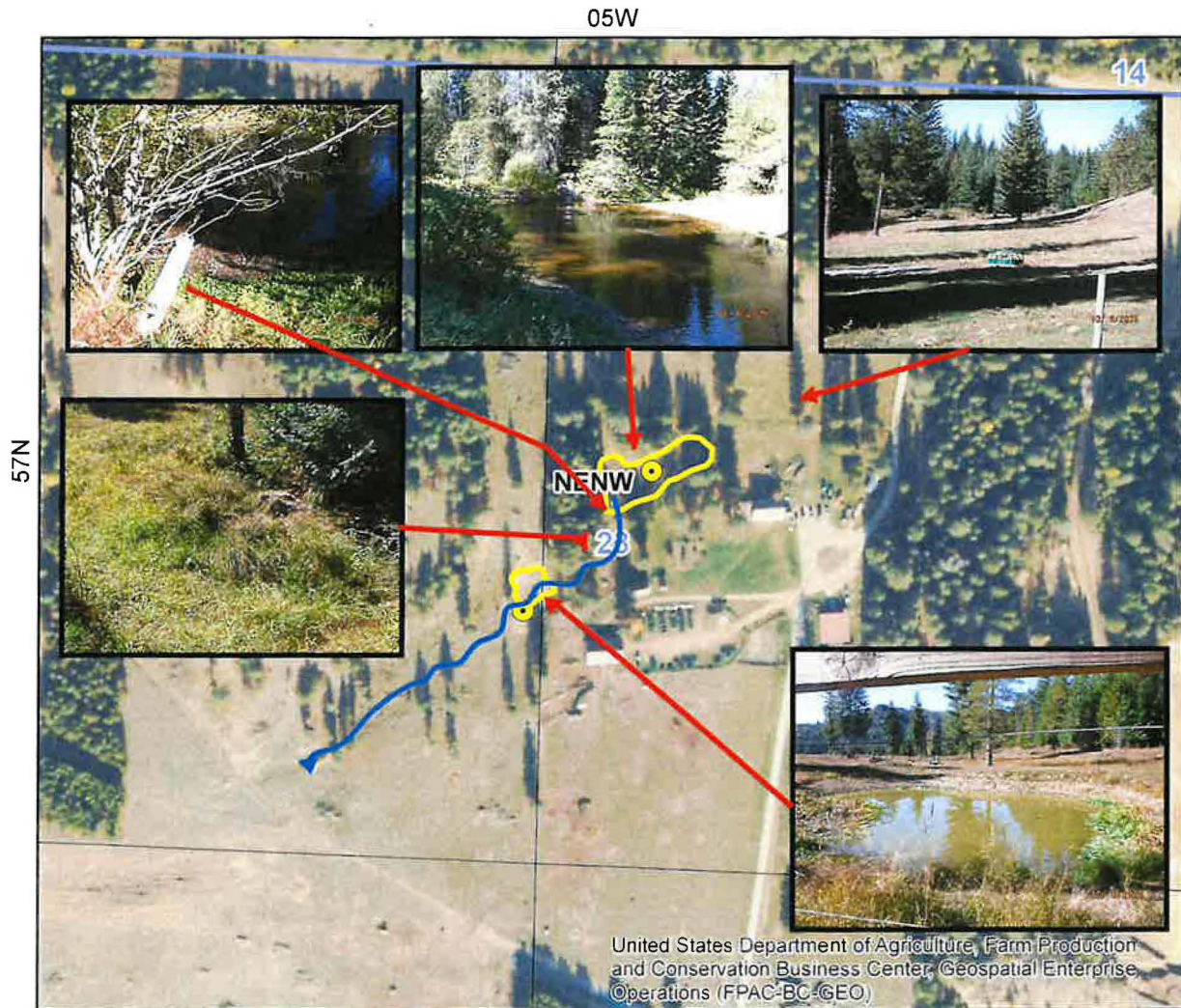
2. Recommended Amendments

☐ 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 ☒ None

I. AUTHENTICATION Luke Bates – Sr Water Resource AgentField Examiner's Name  Date 11/3/2025Reviewer Michelle Richman Date 8/10/26

State of Idaho
Department of Water Resources
Attachment to Field Exam
97-8077

This map depicts the STOCKWATER STORAGE and FIRE PROTECTION STORAGE system diagram.



0 0.035 0.07 0.14 Miles

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



Total Storage Calculations

FILE NUMBER	97-8077
REVIEWER	L.BATES
DATE	10/7/2025

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

EASTERN STORAGE POND

Surface Area (AC.)	0.3	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	4	"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)	1.2	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)	0	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)	0.0	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.5	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	1.7	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.

Total Storage Calculations

FILE NUMBER	97-8077
REVIEWER	L.BATES
DATE	10/7/2025

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User Input
Calculated value
Formula Explanations

WESTERN STORAGE POND

Surface Area (AC.)	0.1	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	4	"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)	0.4	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)	0	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)	0.1	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.2	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	0.7	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.



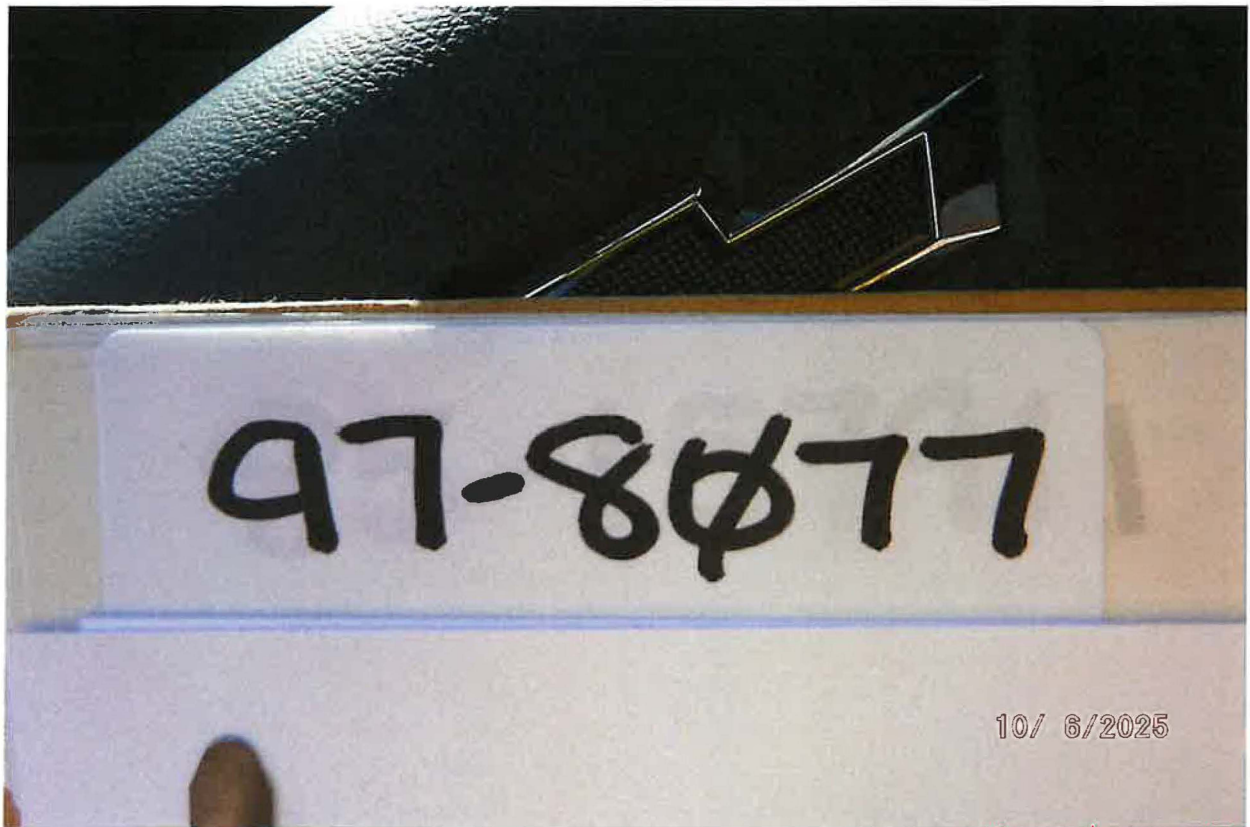
BENEFICIAL USE FIELD EXAM DATE 6/28/2023
INITIAL EXAM CONDUCTED BY SANDRA THIEL – RETIRED

PHOTOGRAPH OF LARGE POND WITH IN-POND GROUNDWATER SOURCE USED FOR FIRE PROTECTION
STORAGE AND STOCKWATER STORAGE PURPOSES



IMAGE CAPTURE DATE 6/28/2023 BY SANDRA THIEL

PHOTOGRAPH OF SMALLER POND LOCATED SW OF LARGE POND
FIRE PROTECTION STORAGE AND STOCKWATER STORAGE POU



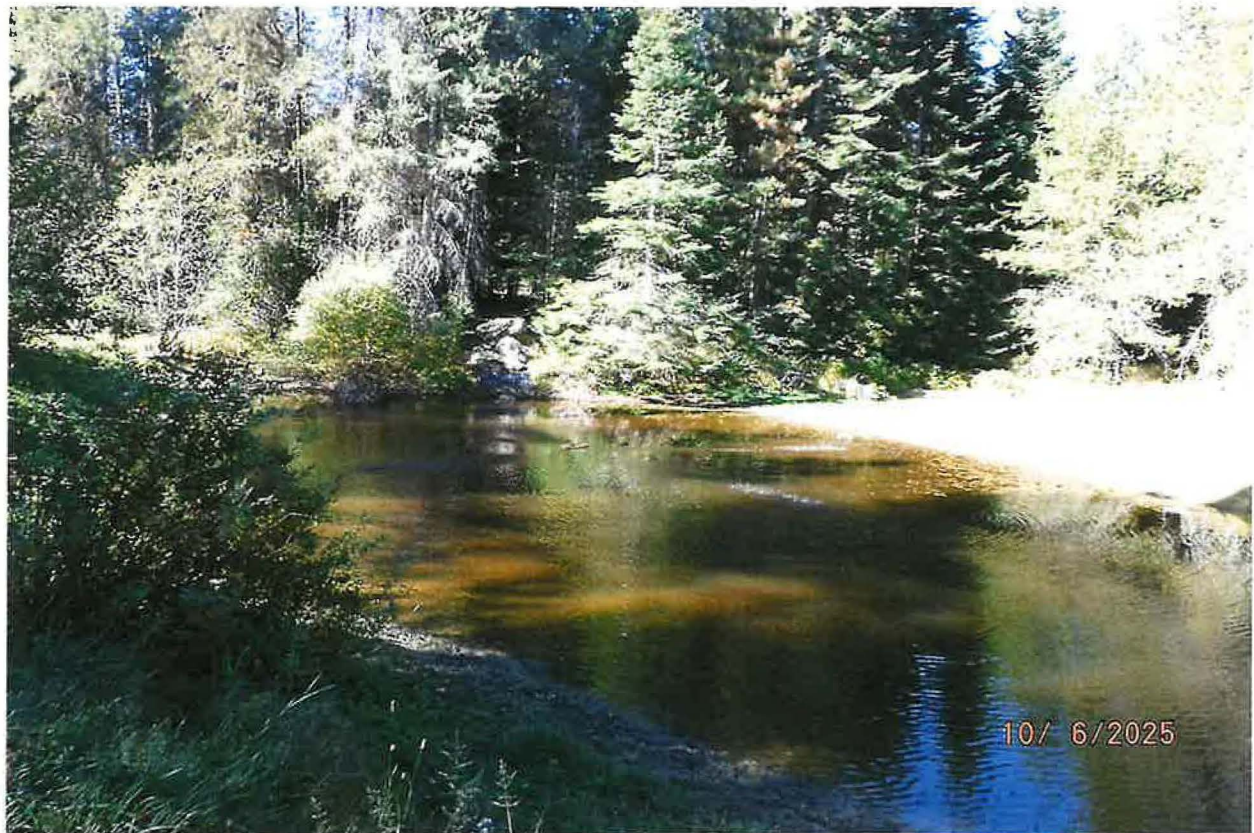
BENEFICIAL USE FIELD EXAM DATE 10/6/2025 [follow up Site visit] JBates 10/7/25



CATTLE RANCH WHICH RAISES AND SELLS BEEF CATTLE



POD & POU – NORTHEASTERN STOCKWATER AND FIRE PROTECTION STORAGE
POND FLLD BY IN-POND GROUND WATER SOURCE. NO INFLOW CHANNEL TO
STORAGE POND OBSERVED



NORTHEASTERN STORAGE POND LOOKING WESTWARD



8 INCH STEEL OVERFLOW DISCHARGE PIPE FROM NORTHEASTERN POND
BECOMES START OF UNNAMED STREAM SOURCE WHICH FEEDS LOWER
SOUTHWESTERN POND – LATE FALL LOW WATER LEVELS RESULT IN DRY
STREAM BED



UNNAMED STREAM CHANNEL HEAVILY OVERGROWN WITH GRASSES –
CHANNEL WAS APPROXIMATELY 1.5 FT DEEP WINDING DOWN DRAINAGE



POD AND POU – LOWER SOUTHWESTERN STORAGE POND AND EARTHEN BANK
POD WHICH IMPOUNDS UNNAMED STREAM FLOW FROM UPPER POND



POU – STOCKWATER STORAGE AND FIRE PROTECTION STORAGE
SOUTHWESTERN POND



I OBSERVED SEVERAL HEAD OF CATTLE MOVING AWAY FROM THE OPEN MEADOW HEADED INTO TREE LINE AS I CAME INTO THE PROPERTY FOR THE EXAM. STOCKWATER STORAGE IS FOR 50 PAIR BREEDING STOCK FOR UP TO 100 HEAD ANNUALLY