

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-15434
Exam Date: 06/05/2020

1. Current Owner:
KOOTENAI COUNTY SOLID WASTE 3650 N RAMSEY RD COEUR D ALENE ID 83815
2. Accompanied by: Laureen Chaffin and John Phillips
Phone No: 208-446-1430
Address: Same as above
Relationship to permit Holder: Permit holder's representatives

3. **SOURCE:**
RUNOFF

Tributary
SINKS

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
95-18042	GROUNDWATER	IRRIGATION, FIRE PROTECTION	PERMIT IN PROCESS FOR LICENSING
95-18045	GROUNDWATER	INDUSTRIAL, FIRE PROTECTION	PERMIT IN PROCESS FOR LICENSING
95-8281	GROUNDWATER	DOMESTIC	LICENSE

Comments: Rights 95-18042 and 95-18045 are both permits that were split from this permit 95-15434; 95-18042 uses two groundwater wells for irrigation and fire protection use, with overlap in POU between this rights' industrial from storage POU and 95-18042's fire protection POU. Due to fire protection use being an exempt use, there is no overlap concern between rights 95-15434 and 95-18042. Right 95-18045 uses one groundwater well for industrial and fire protection use, with overlap between this rights' industrial from storage POU and 95-18045's industrial and fire protection POU. These two rights each use their designated volume independent of each other, but have a common POU. There is no need of an overlap condition because the industrial use for these two right is limited to 9.6 af + 1.5 af respectively by each right's annual volume, and are bound by their respective annual volumes identified on each right. Based on the respective annual volumes on each right for industrial uses, there is no concern for overlap between rights 95-15434 and 95-18045.

Right 95-8281 is a groundwater source license that has an adjudication recommended claim, active status, for domestic uses that overlaps this right's industrial from storage POU. Right 95-8281 used two wells not associated with this rights water source, and the two homes associated with the 95-8281 have been demolished in the recent past and no longer use water for domestic purposes. Right 95-8281 is not a concern for overlap.

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:**

RUNOFF SW¼ NE¼, Sec. 1, Twp 48N, Rge 05W, B.M. KOOTENAI County
 RUNOFF SW¼ NE¼, Sec. 1, Twp 48N, Rge 05W, B.M. KOOTENAI County
 RUNOFF SE¼ NW¼, Sec. 1, Twp 48N, Rge 05W, B.M. KOOTENAI County
 RUNOFF NE¼ SW¼, Sec. 1, Twp 48N, Rge 05W, B.M. KOOTENAI County
 RUNOFF NE¼ SW¼, Sec. 1, Twp 48N, Rge 05W, B.M. KOOTENAI County
 RUNOFF NW¼ SW¼, Sec. 1, Twp 48N, Rge 05W, B.M. KOOTENAI County

RUNOFF NW¼ SW¼, Sec. 1, Twp 48N, Rge 05W, B.M. KOOTENAI County
 RUNOFF NW¼ SW¼, Sec. 1, Twp 48N, Rge 05W, B.M. KOOTENAI County
 RUNOFF NW¼ SW¼, Sec. 1, Twp 48N, Rge 05W, B.M. KOOTENAI County
 RUNOFF NW¼ SW¼, Sec. 1, Twp 48N, Rge 05W, B.M. KOOTENAI County
 RUNOFF SW¼ SW¼, Sec. 1, Twp 48N, Rge 05W, B.M. KOOTENAI County
 RUNOFF SW¼ SW¼, Sec. 1, Twp 48N, Rge 05W, B.M. KOOTENAI County
 RUNOFF SW¼ SW¼, Sec. 1, Twp 48N, Rge 05W, B.M. KOOTENAI County

Method of Determination: GPS - POD(s) are thirteen ponds with earthen dams that collect runoff water located at:

(SWNE) located at -116°55.540, 47°32.171 – Pond – 5A.
 (SWNE) located at -116°55.517, 47°32.143 – Pond – 5B.
 (SENE) located at -116°55.646, 47°32.114 – Pond – TP1.
 (NESW) located at -116°55.735, 47°31.972 – Pond – 6A.
 (NESW) located at -116°55.698, 47°31.979 – Pond – 6B.
 (NWSW) located at -116°55.994, 47°31.926 – Pond – LP1.
 (NWSW) located at -116°55.049, 47°31.905 – Pond – LP2.
 (NWSW) located at -116°55.193, 47°31.876 – Pond – 1B.
 (NWSW) located at -116°55.091, 47°31.877 – Pond – 2A.
 (NWSW) located at -116°55.056, 47°31.873 – Pond – 2B.
 (SWSW) located at -116°56.185, 47°31.815 – Pond – LP3.
 (SWSW) located at -116°55.988, 47°31.780 – Pond – 3A.
 (SWSW) located at -116°55.937, 47°31.794 – Pond – 3B.

PLACE OF USE: FIRE PROTECTION STORAGE and INDUSTRIAL 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	
48N	05W	1			X					X	X	X	X						

PLACE OF USE: INDUSTRIAL 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	
48N	05W	1		X	X		X	X	X	X	X	X	X	X		X			
48N	05W	2													X			X	
48N	05W	11	X																
48N	05W	12					X	X											

Method of Determination: Field exam 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
N/A					

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
N/A						

2. Measurements: N/A

E. FLOW CALCULATIONS

Measured Method: N/A

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 =$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} =$$

2. Volume Calculations for Other Uses:

See 13 ea pond analysis worksheets.

Industrial From Storage Annual Volume:

- KC Solid Waste Water Truck annual volume = 340 loads year 2019 x 4,800 gal per load = 1,632,000 gal / 328,580 gal per af = 5.0 af
- Contractor Water Truck annual volume = 1,500,000 gal year 2019 / 235,850 gal per af = 4.6 af
- Total Industrial from Storage Volume = 5.0 af (KC Solid Waste use) + 4.6 af (Contractor use) = **9.6 af**

$$\text{Fire Protection Storage Annual Volume} = 59.8 \text{ af (13 pond's capacity)} + 13.3 \text{ af (13 pond's seepage/evaporation)} = \mathbf{73.1 \text{ af}}$$

$$\text{Industrial Storage Annual Volume} = 9.6 \text{ af (Industrial multiple fill requirement)} + 59.8 \text{ af (Fire Protection Storage annual volume)} = \mathbf{69.4 \text{ af}}$$

G. NARRATIVE/REMARKS/COMMENTS

This WR has been split into four separate rights, including 95-15434, 95-18041, 95-18042, and 95-18045. This right, 95-15434 accounts for thirteen (13) ponds located at the Kootenai County Solid Waste Facility that are used solely for industrial storage, industrial from storage, and fire protection storage. The ponds associated with this WR were split as they are not incorporated in the industrial beneficial use from groundwater, nor the irrigation beneficial use from groundwater systems designated in right(s) 95-18045 and 95-18042 respectively.

Field exam performed on 6/5/2020 with the applicant's representatives, Laureen Chaffin and John Phillips, showed 13 ponds that filled from Runoff water sources. As this is a pond storage water right without diversion to storage components, there is no diversion rate applied to this license. Thirteen separate PODs are applied to this right, one for each pond that receives surface runoff water annually from the surrounding area on the applicant's property. During the field exam, each pond was observed, identified on field maps, and photographs taken during the exam.

At the time of licensing review Arcmap aerial imagery was used to trace out each pond in order to determine the surface area (acres) for each pond. The maximum depths for each pond was provided by the applicant, who had completed an independent pond analysis sheet for each pond. The industrial ponds were constructed to be sedimentation ponds, and leachate ponds. All of the ponds dedicated to leachate storage were constructed with liners, to include ponds 1B and 2B, which serve primary sedimentation ponds, but also as emergency leachate storage ponds. The pond(s) size and volume data is shown below, and results are recommended for use in licensing this water right:

WATER RIGHT 95-15434 POND ANALYSIS WORKSHEET RESULTS FOR 13 EA PONDS							
Pond Name	Surface Area (ac)	Max Depth (ft)	Average Depth (ft)	Pond Capacity (af)	Seepage Loss (af)	Evaporation Loss (af)	Total Volume Required (af)
1B	1.0	11.25	4.5	4.5	0	0.6	5.1
2A	0.8	20.0	8.0	6.4	0.9	0.6	7.9
2B	1.0	11.25	4.5	4.5	0	0.6	5.1
3A	0.3	12.5	5.0	1.5	0.3	0.6	2.4
3B	0.5	20.0	8.0	4	0.5	0.6	5.1
5A	0.3	8.75	3.5	1.1	0.3	0.6	2.0
5B	1.0	11.25	4.5	4.5	1.1	0.6	6.2
6A	0.5	11.25	4.5	2.3	0.5	0.6	3.4
6B	1.0	11.25	4.5	4.5	1.1	0.6	6.2
LP1	0.5	18.75	7.5	3.8	0	0.6	4.4
LP2	0.6	18.75	7.5	4.5	0	0.6	5.1
LP3	1.5	25	10	15.0	0	0.6	15.6
TP1	0.7	11.25	4.5	3.2	0.8	0.6	4.6
TOTALS	9.7	ORANGE = LINED POND		59.8	5.5	7.8	73.1
INDUSTRIAL FROM STORAGE ANNUAL VOLUME ADDED TO TOTAL VOLUME =							9.6 AF
INDUSTRIAL STORAGE ANNUAL VOLUME =							82.7 AF
FIRE PROTECTION STORAGE ANNUAL VOLUME =							73.1 AF

The thirteen ponds combined produce the industrial storage and fire protection storage POU for this water right. Ponds LP1, LP2, and LP3 are primary leachate storage ponds. Ponds 1B and 2B are primary sedimentation ponds, and serve as emergency leachate storage ponds. The remaining eight ponds serve primarily as sedimentation ponds. The combined surface area for the 13 ponds equals 9.7 acres, combined pond capacity equals 59.8 af, combined seepage and evaporation loss equals 13.3 af, combined multiple fill volume equals **9.6 af** for industrial from storage use, and the combined total

volume required annually for the 13 ponds equals **82.7 af**, which is recommended as the maximum diversion volume for this water right license. The fire protection storage annual volume equals 59.8 af (13 pond's capacity) + 13.3 af (13 pond's seepage and evaporation loss) = **73.1 af**, which will be applied to the license.

Permit 95-15434 authorized up to 200 af of industrial storage and fire protection storage volume annually. The difference in permit volume and recommended licensing maximum diversion volume comes from multiple factors. When applied for, there were additional ponds that were not developed by the applicants in the permit development period, resulting in a reduction in anticipated combined annual volume value. Additionally, IDWR's pond analysis sheet uses current seepage and evaporation modeling data to accurately calculate pond volumes that resulted in lower annual volume losses for these factors.

The applicant uses water trucks filled with water from sedimentation ponds throughout the year for industrial from storage use that includes dust abatement, and washing down solid waste bays. The industrial from storage POU was determined to be the entirety of the applicant's property at time of field exam. The applicant filled water trucks from sediment ponds using a semi-permanent pumping station set up at pond – TP1, as well as portable trailer mounted water transfer pump and intake pipe from the other sedimentation ponds throughout the year. None of the leachate ponds are used for dust abatement. The annual volume associated with industrial from storage beneficial use equals

- KC Solid Waste Water Truck annual volume = 340 loads year 2019 x 4,800 gal per load = 1,632,000 gal / 328,580 gal per af = 5.0 af
- Contractor Water Truck annual volume = 1,500,000 gal year 2019 / 235,850 gal per af = 4.6 af
- Total Industrial from Storage Volume = 5.0 af (KC Solid Waste use) + 4.6 af (Contractor use) = **9.6 af**

As this right was split into four total water rights, several conditions pertaining to wildlife storage, industrial, fire protection, and irrigation were removed from this permit during licensing review to include 26A, 077, 082, WD8, 111, X02, 046, 01M, and 106. Condition 219 was replaced with 259 to describe the 13 ponds volume and multiple fill factors. Condition 220 was updated to reflect the 13 pond's capacity (af) and size (ac). Condition 004 was added to the permit during licensing review.

At time of licensing, the permitted POU for the industrial from storage beneficial use was found to be inaccurate, see below:

POU: authorized on permit:

PLACE OF USE: INDUSTRIAL 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	
48N	05W	1			X					X	X	X	X	X					
48N	05W	2																X	

POU: verified during field exam:

PLACE OF USE: INDUSTRIAL 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	
48N	05W	1		X L2	X		X L3	X L4	X	X	X	X	X	X		X			
48N	05W	2													X			X	
48N	05W	11	X L1																
48N	05W	12					X L3	X L4											

An Application for Amendment was initiated, and mailed with cover letter to the applicant on 23 November 2020.

Overlap Concern: Rights 95-18042 and 95-18045 are both permits that were split from this permit 95-15434; 95-18042 uses two groundwater wells for irrigation and fire protection use, with overlap in POU between this rights' industrial from storage POU and 95-18042's fire protection POU. Due to fire protection use being an exempt use, there is no overlap concern between rights 95-15434 and 95-18042. Right 95-18045 uses one groundwater well for industrial and fire protection use, with overlap between this rights' industrial from storage POU and 95-18045's industrial and fire protection POU. These two rights each use their designated volume independent of each other, but have a common POU. There is no need of an overlap condition because the industrial use for these two right is limited to 9.6 af + 1.5 af respectively by each right's annual volume. Based on the respective annual volumes on each right for industrial uses, there is no concern for overlap between rights. Right 95-8281 used two wells not associated with this rights water source, and the two homes associated with the 95-8281 have been demolished in the recent past and no longer use water for domestic purposes. Right 95-8281 is not a concern for overlap.

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

H. RECOMMENDATIONS

1. Recommended Amounts

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Annual Volume</u>
FIRE PROTECTION STORAGE	01/01 to 12/31	73.1 AF
INDUSTRIAL STORAGE	01/01 to 12/31	82.7 AF
INDUSTRIAL FROM STORAGE	01/01 to 12/31	9.6 AF

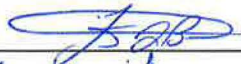
Totals: 82.7 AF

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 - Water Resource Agent

Field Examiner's Name  Date 11/28/2020
 Reviewer  Date 12/7/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
95-15434

INDUSTRIAL STORAGE and FIRE PROTECTION STORAGE system diagram.



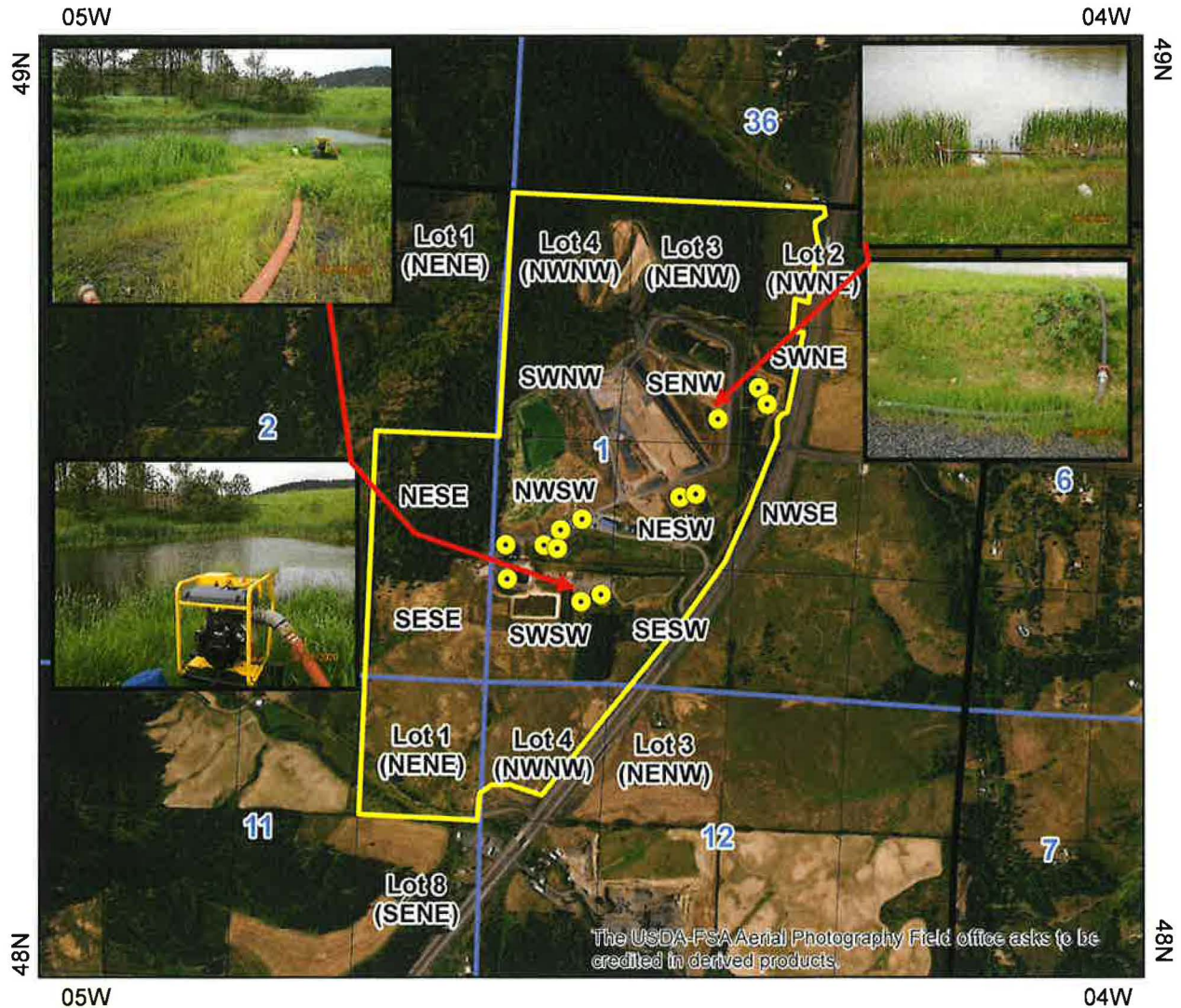
-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters

0 0.075 0.15 0.3 Miles



State of Idaho
Department of Water Resources
Attachment to Field Exam
95-15434

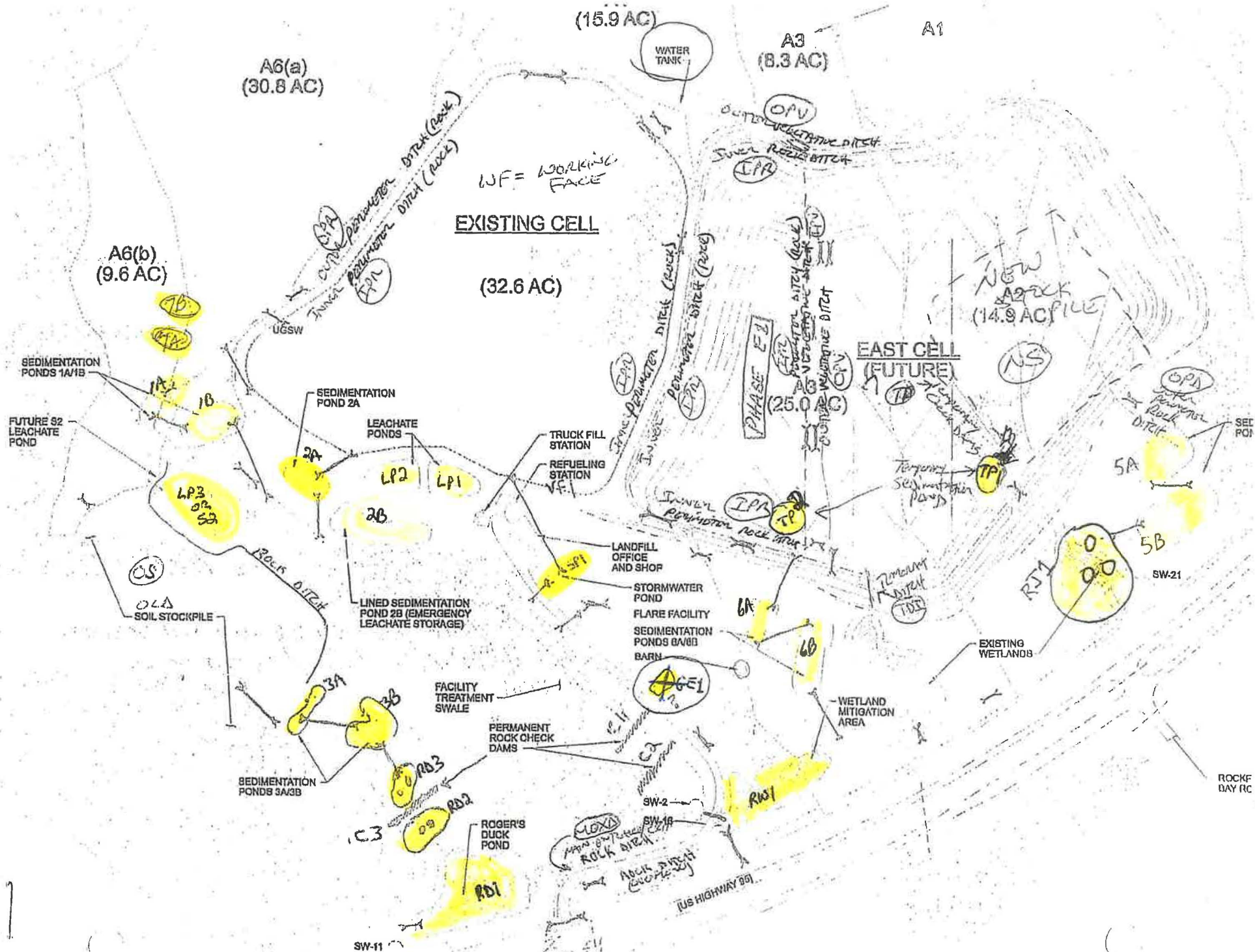
INDUSTRIAL FROM STORAGE system diagram.



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

0 0.225 0.45 0.9 Miles





POND #	On-or-Off Stream	Length (ft)	Width (ft)	AVERAGE DEPTH (ft)	SURFACE AREA (SQFT)
1A	off	135	63	6.18	8505
1B	off	201	102	4.22	20502
2A	off	165	72	7.62	11880
2B	off	279	105	4.50	29295
3A	off	195	30	4.96	5850
3B	off	171	150	7.68	25650
RD3	off	180	143	6.71	25740
RD2	off	195	110	7.27	21450
RD1	off	450	181	4.90	81450
RJ1	off	280	116	5.62	32480
5A	off	150	55	3.44	8250
5B	off	525	97	4.06	50925
SP1	off	100	43	3.88	4300
TP2	off	100	100	3.10	10000
TP1	off	110	40	4.30	4400
RW1	off	462	143	4.37	66066
6A	off	160	55	4.40	8800
6B	off	293	107	4.50	31351
LP1	off	189	96	7.34	18144
LP2	off	201	98	7.40	19698
LP3	off	303	168	10.00	50904
7A*	off	130	45	4.00	5850
7B*	off	210	62	4.00	13020
GE1	off	80	37	1.00	2960

*Future storm water control pond - not yet constructed

Pond Size (AF)	EVAPORATION (AF/Y)	SEEPAGE RATE (AFY)	Pond Consumption (AF/Y)
1.21	0.59	0.70	2.5
1.99	1.43	1.68	5.1
2.08	0.83	0.97	3.9
3.03	2.05	2.39	7.5
0.67	0.41	0.48	1.6
4.52	1.79	2.10	8.4
3.97	1.80	2.10	7.9
3.58	1.50	1.75	6.8
9.16	5.69	6.66	21.5
4.19	2.27	2.65	9.1
0.65	0.58	0.67	1.9
4.75	3.56	4.16	12.5
0.38	0.30	0.35	1.0
0.71	0.70	0.82	2.2
0.43	0.31	0.36	1.1
6.63	4.61	5.40	16.6
0.89	0.61	0.72	2.2
3.24	2.19	2.56	8.0
3.06	1.27	1.48	5.8
3.35	1.38	1.61	6.3
11.69	3.55	4.16	19.4
0.54	0.41	0.48	1.4
1.20	0.91	1.06	3.2
0.07	0.21	0.24	0.5

Total Storage Calculations		
FILE NUMBER	95-15434	This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond. Print Page to PDF
REVIEWER	Luke Bates	
DATE	11/19/2020	
POND - 1B		User Input Calculated value Formula Explanations
Surface Area (AC.)	1	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	4.5	"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)	4.5	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. 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.
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). Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	0.0	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.6	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	5.1	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	95-15434	This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond. Print Page to PDF
REVIEWER	Luke Bates	
DATE	11/19/2020	
POND - 2A		User Input Calculated value Formula Explanations
Surface Area (AC.)	0.8	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	8	"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)	6.4	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. 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.
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). Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	0.9	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.6	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	7.9	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	95-15434	This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.			
REVIEWER	Luke Bates				
DATE	11/19/2020				
POND - 2B		Print Page to PDF <table border="1"> <tr> <td>User Input</td> </tr> <tr> <td>Calculated value</td> </tr> <tr> <td>Formula Explanations</td> </tr> </table>	User Input	Calculated value	Formula Explanations
User Input					
Calculated value					
Formula Explanations					
Surface Area (AC.)	1	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.			
Average Pond Depth (FT.)	4.5	"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)	4.5	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. 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.			
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). Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.			
Estimated Seepage Loss (AF)	0.0	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.			
Estimated Evaporation Loss (AF)	0.6	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.			
Total Volume Required (AF)	5.1	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	95-15434	This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.			
REVIEWER	Luke Bates				
DATE	11/19/2020				
POND - 3A		Print Page to PDF <table border="1"> <tr> <td>User Input</td> </tr> <tr> <td>Calculated value</td> </tr> <tr> <td>Formula Explanations</td> </tr> </table>	User Input	Calculated value	Formula Explanations
User Input					
Calculated value					
Formula Explanations					
Surface Area (AC.)	0.3	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.			
Average Pond Depth (FT.)	5	"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)	1.5	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. 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.			
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). Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.			
Estimated Seepage Loss (AF)	0.3	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.			
Estimated Evaporation Loss (AF)	0.6	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.			
Total Volume Required (AF)	2.4	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	95-15434	This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond. Print Page to PDF
REVIEWER	Luke Bates	
DATE	11/19/2020	
POND - 3B		User Input Calculated value Formula Explanations
Surface Area (AC.)	0.5	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	8	"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)	4.0	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. 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.
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). Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	0.5	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.6	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	5.1	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	95-15434	This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond. Print Page to PDF
REVIEWER	Luke Bates	
DATE	11/19/2020	
POND - 5A		User Input Calculated value Formula Explanations
Surface Area (AC.)	0.3	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	3.5	"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)	1.1	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. 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.
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). Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	0.3	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.6	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	2.0	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	95-15434	This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.
REVIEWER	Luke Bates	
DATE	11/19/2020	
POND - 5B		Print Page to PDF
Surface Area (AC.)	1	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	4.5	"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)	4.5	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. 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.
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 from storage component if the from storage 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). Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	1.1	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.6	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	6.2	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	95-15434	This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.
REVIEWER	Luke Bates	
DATE	11/19/2020	
POND - 6A		Print Page to PDF
Surface Area (AC.)	0.5	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	4.5	"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)	2.3	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. 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.
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 from storage component if the from storage 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). Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	0.5	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.6	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	3.4	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	95-15434	This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.
REVIEWER	Luke Bates	
DATE	11/19/2020	
POND - 6B		Print Page to PDF
Surface Area (AC.)	1	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	4.5	"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)	4.5	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. 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.
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 from storage component if the from storage 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). Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	1.1	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.6	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	6.2	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.

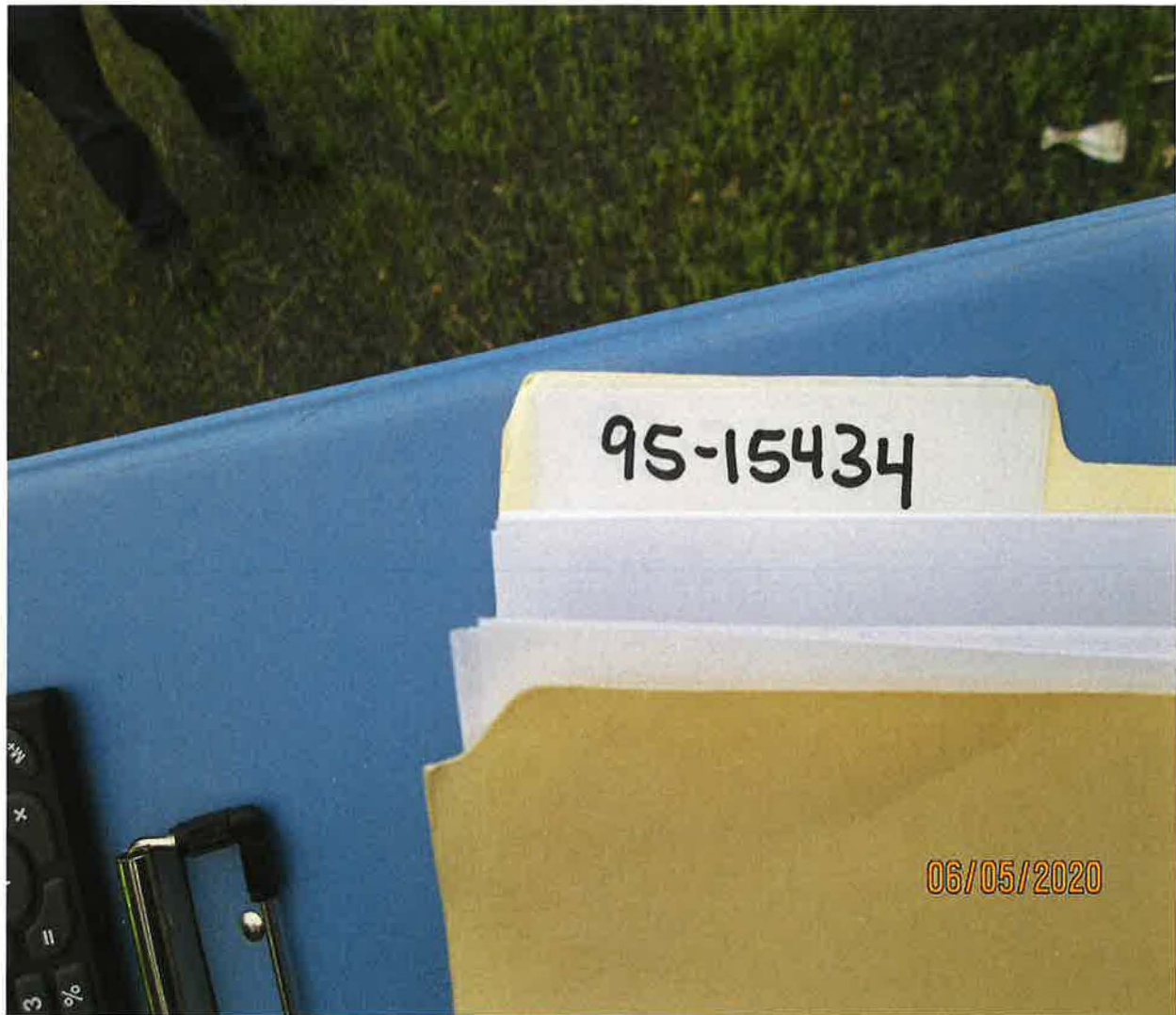
Total Storage Calculations		
FILE NUMBER	95-15434	This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.
REVIEWER	Luke Bates	
DATE	11/19/2020	
POND - LP1		Print Page to PDF
Surface Area (AC.)	0.5	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	7.5	"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)	3.8	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. 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.
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 from storage component if the from storage 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). Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	0.0	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.6	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	4.4	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	95-15434	This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond. Print Page to PDF
REVIEWER	Luke Bates	
DATE	11/19/2020	
POND - LP2		
Surface Area (AC.)	0.6	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	7.5	"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)	4.5	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. 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.
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). Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	0.0	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.6	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	5.1	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	95-15434	This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond. Print Page to PDF
REVIEWER	Luke Bates	
DATE	11/19/2020	
POND - LP3		
Surface Area (AC.)	1.5	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	10	"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)	15.0	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. 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.
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). Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	0.0	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.6	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	15.6	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	95-15434	This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond. Print Page to PDF
REVIEWER	Luke Bates	
DATE	11/19/2020	
POND - TP1		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.)	4.5	"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)	3.2	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. 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.
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). Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	0.8	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.6	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	4.6	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.

WATER RIGHT 95-15434 POND ANALYSIS WORKSHEET RESULTS FOR 13 EA PONDS							
Pond Name	Surface Area (ac)	Max Depth (ft)	Average Depth (ft)	Pond Capacity (af)	Seepage Loss (af)	Evaporation Loss (af)	Total Volume Required (af)
1B	1.0	11.25	4.5	4.5	0	0.6	5.1
2A	0.8	20.0	8.0	6.4	0.9	0.6	7.9
2B	1.0	11.25	4.5	4.5	0	0.6	5.1
3A	0.3	12.5	5.0	1.5	0.3	0.6	2.4
3B	0.5	20.0	8.0	4	0.5	0.6	5.1
5A	0.3	8.75	3.5	1.1	0.3	0.6	2.0
5B	1.0	11.25	4.5	4.5	1.1	0.6	6.2
6A	0.5	11.25	4.5	2.3	0.5	0.6	3.4
6B	1.0	11.25	4.5	4.5	1.1	0.6	6.2
LP1	0.5	18.75	7.5	3.8	0	0.6	4.4
LP2	0.6	18.75	7.5	4.5	0	0.6	5.1
LP3	1.5	25	10	15.0	0	0.6	15.6
TP1	0.7	11.25	4.5	3.2	0.8	0.6	4.6
TOTALS	9.7	ORANGE = LINED POND		59.8	5.5	7.8	73.1
INDUSTRIAL FROM STORAGE ANNUAL VOLUME ADDED TO TOTAL VOLUME =							9.6 AF
INDUSTRIAL STORAGE ANNUAL VOLUME =							82.7 AF
FIRE PROTECTION STORAGE ANNUAL VOLUME =							73.1 AF



NOTE: RIGHT 95-15434 HAS RUNOFF WATER SOURCE POINTS OF DIVERSION ASSOCIATED WITH EACH STORAGE POND. THERE ARE NO PHOTOGRAPHS ILLUSTRATING RUNOFF WATER FOR LICENSING PURPOSES.



INDUSTRIAL STORAGE, INDUSTRIAL FROM STORAGE, and FIRE PROTECTION STORAGE POU – 2 PONDS – 5A and 5B



INDUSTRIAL STORAGE, INDUSTRIAL FROM STORAGE, and FIRE PROTECTION STORAGE POU – POND 6A



INDUSTRIAL STORAGE, INDUSTRIAL FROM STORAGE, and FIRE PROTECTION STORAGE POU – POND 6B



INDUSTRIAL STORAGE, INDUSTRIAL FROM STORAGE, and FIRE PROTECTION STORAGE POU – POND TP1



INDUSTRIAL FROM STORAGE POU - PUMP SYSTEM FROM POND TP1



INDUSTRIAL FROM STORAGE PUMP FROM POND-TO-WATER TRUCK VIA HOSE CONNECTION



INDUSTRIAL STORAGE, INDUSTRIAL FROM STORAGE, and FIRE PROTECTION STORAGE POU – POND 1B



INDUSTRIAL STORAGE POU – LEACHATE POND – LP1 and 2



INDUSTRIAL STORAGE POU – LEACHATE POND – LP3



INDUSTRIAL STORAGE, INDUSTRIAL FROM STORAGE, and FIRE PROTECTION STORAGE POU – POND 2A



INDUSTRIAL FROM STORAGE PORTABLE WATER TRANSFER PUMP (16HP) WITH HOSE TO FILL WATER TRUCKS





INDUSTRIAL STORAGE, INDUSTRIAL FROM STORAGE, and FIRE PROTECTION STORAGE POU – POND 2B



INDUSTRIAL STORAGE, INDUSTRIAL FROM STORAGE, and FIRE PROTECTION STORAGE POU – POND 3A



INDUSTRIAL STORAGE, INDUSTRIAL FROM STORAGE, and FIRE PROTECTION STORAGE POU – POND 3B